THE VANCOUVER RENTAL HOUSING MARKET TO 1991

A Working Paper Prepared by

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and
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For

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Housing
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EXECUTIVE SUMMARY

Clayton Research Associates and Woodbridge, Reed and Associates were commissioned by the Ministry of Lands, Parks and Housing to examine the outlook for the rental housing market within the Vancouver Census Metropolitan Area (CMA) over the 1984-1991 period including an analysis of the impact of Expo 86. The analysis is based on information available in December, 1983 with selected data updated to May, 1984.

It must be recognized that it is not possible to predict the future with precise accuracy. Hence, it is recommended that the performance of Vancouver's rental market and expectations regarding the impact of Expo 86 be monitored closely to assess the continued appropriateness of the projections and analysis and, if necessary, to modify the conclusions of the study.

The main findings of the study are:

- Rental vacancy rates are forecast to be at a cyclical low point in 1986 regardless of the impact of Expo 86. Over the 1984-1991 period, the cyclical nature of the rental market will be a more important factor in determining trends in rents and vacancy rates than Expo 86.

- Rising rents are expected to make unsubsidised rental construction feasible by the latter part of the 1980s.

- There appears to be an opportunity for the development industry to construct about 2,000 new rental units for the Vancouver market by 1986 to take advantage of the peak Expo demand and the strong rental market expected over the balance of the decade. Approximately 1,000 units will be required for pavilion staff and entertainers at the fair with an additional 1,000 units to deal with demand from other workers at the fair and the excess demand for commercial hotel-type accommodation from visitors.

- Assuming that 2,000 units are built and come onto the private rental market following the closing of Expo 86 in mid October, 1986, the overall rental vacancy rate is likely to increase to a relatively modest 0.7 percent (compared to 0.3 percent in the absence of Expo 86).

- Conversion of existing rental buildings to apartment hotel use for the period of the fair is unlikely to be widespread since it appears generally not to be economically feasible.

These conclusions are based on a consideration of the following:

Overall Demand for New Housing in the Vancouver CMA Excluding Impact of Expo 86

- On an average annual basis, population growth in the Vancouver CMA is projected to decline to 15,363 in the 1981-1986 period from 20,383 in the 1976-1981 period, assuming no impact from Expo 86. In 1986-1991, population growth is projected to average 16,600 annually.

- Household growth in the Vancouver CMA is projected to average about 9,900 annually during both the 1981-1986 and 1986-1991 periods compared to 13,853 annually over the 1976-1981 period. The reasons behind the decline in household growth in 1981-1991 are slower population growth, changes in the age structure of the population such that fewer people are in the prime household formation age groups and the expectation of no increase (and in some cases a decline) in household headship rates in the 1981-1986 period due largely to the effects of the 1981-1982 recession.

- The total demand for new housing (adding net replacement demand to the projected household growth) in the Vancouver CMA is projected to average 11,600 units annually over both the 1981-1986 and 1986-1991 periods. This compares to an average annual housing demand of 15,400 units in 1976-1981.

Demand for New Rental Housing Excluding Impact of Expo 86

- The composition of household growth in the Vancouver CMA is projected to change significantly in the 1980s compared to the 1970s. Of particular importance for rental housing demand, non-family household growth is projected to comprise a much smaller proportion of total household growth during the decade.

- The changing composition of household growth, as well as the prospect of rising real rents, is projected to result in a decline in renter household growth in the Vancouver CMA to an average of 3,009 annually in 1981-1986 from an average of 6,517 in 1976-1981. In 1986-1991, annual renter household growth is projected to average 1,710.

- During the 1976-1981 period, a large number of condominium and other ownership dwellings appear to have switched tenure and became part of the rental housing stock. Estimates prepared for this study indicate that approximately 10,000 units may have been switched to rental tenure - many of these units appear to have been owned by investors who elected to rent out their units to create cash flow.

- Total demand for new rental housing is projected to average over 5,000 units annually in 1981-1986. This demand includes both renter household growth and a share of the net replacement demand

as well as an allowance for a switch back to the ownership market for many of the ownership units which had been put on the rental market in 1976-1981. Demand for new rental housing is projected to average less than 3,300 units annually in 1986-1991.

Rental Market Conditions Excluding Impact of Expo 86

- If Expo 86 was not being held, the analysis here shows the overall rental vacancy rate in the Vancouver CMA falling from 2.3 percent in June, 1984 to 0.3 percent by June, 1986.
- The low vacancy rate together with rising real market rents on new rental accommodation would be expected to induce the private sector to begin construction of a significant number of rental units in 1988-1989. Increased volumes of rental construction could lead to a 2.0 percent vacancy rate for the total rental housing stock by June, 1991.
- It is assumed throughout the 1984-1991 period that social housing completions will remain constant at 1,300 units per year - the average of the past five years.

Rental Demand From Expo 86

- The construction of the Expo 86 facilities is not expected to generate sufficient additional jobs to significantly impact the Vancouver CMA rental market. The employment created as a result of the construction work should largely be filled by unemployed workers already residing in the Vancouver area.
- Expo 86 has a need for up to 1,000 units of rental housing for out-of-town pavilion workers and entertainers at the fair. While some of these will be required for up to 12 months, most will be needed only for the six months that the fair is operating.
- The operation of Expo 86 is expected to generate a significant amount of temporary employment in Vancouver, above and beyond pavilion workers and entertainers. But, as with the construction phase, it is expected that the majority of the jobs will be filled by local workers with the addition of students and housewives as temporary employees. Demand for approximately 250 additional rental units for temporary employees at the fair has been estimated.
- There is projected to be a shortfall in the supply of accommodation in the Vancouver area for visitors to the fair, particularly in the peak summer months. It is estimated that approximately 500 to 1,000 rental housing units could be used to house the excess demand for the duration of the fair (the mid-point of 750 units is used in the analysis here).

- Therefore, it is estimated that a total of approximately 2,000 rental units (1,250 units for employees and entertainers and 750 units to accommodate the excess visitor demand for commercial hotel-type accommodation) could be required to accommodate the temporary excess demand created by Expo 86.

Rental Market Impact of Expo 86

- Even without Expo 86, it is projected that the Vancouver rental market will be tight during 1986.

- The additional 2,000 rental units which could be utilized as temporary accommodation for Expo 86 would result in an increased level of vacancies in the period following Expo, but the estimated vacancy rate in June, 1987 would still be a modest 0.7 percent (compared to 0.2 percent if Expo 86 was not held).

- It is unclear at this time the extent to which the private sector will respond to the identified Expo 86 demand for an additional 2,000 rental units. In the absence of impacts from the fair, it is projected that private sector opportunities would emerge in the late 1980s. Because of Expo 86, opportunities appear to exist for developers to move ahead their schedules and put completed units on the market by mid 1986.

Rental Housing Sub-Markets

- The majority of the Vancouver CMA rental accommodation growth occurred in suburban areas such as Surrey and Richmond over the 1976-1981 period. In the absence of Expo 86, these suburban areas are anticipated to remain the growth areas of the Vancouver CMA over the 1981-1991 decade.

- Even without Expo 86, it is projected that vacancy rates in all sub-markets of the Vancouver CMA will be tight during 1986.

- A significant proportion of the demand created by Expo 86 will be for accommodation located either in the inner-city area or in areas with good transportation access to the site of the fair. The West End, Kitsilano, False Creek and the Fairview Slopes are particular sub-markets where demand should be heavy.

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INTRODUCTION

Vacancy rates in the Vancouver rental housing market have eased in the last two years from the very tight situation that characterized the 1979-1981 period. However, with the current low levels of rental construction, it appears likely that there will be a substantial tightening of the rental market over the next year or two.

With the expiry of the MURB (Multiple Unit Residential Building) provision of The Income Tax Act and the termination of CRSP (Canada Rental Supply Plan), substantial volumes of private sector rental construction are unlikely to be forthcoming until rents move considerably higher. This is due to the gap that exists between market rents for new accommodation and so-called economic rents - the level of rents needed to induce investors to develop new rental projects. Such increases in rents would react to low vacancy rates with a lag, but there is a question as to whether the market will accept substantially higher rents for newly-constructed housing since rental demand in general appears to be quite price sensitive.

Superimposed on this short-term rental market scenario of low vacancy rates followed by rising rents are the accommodation needs which will be generated by employees and visitors to Expo 86, the six-month world's fair to be held in Vancouver in 1986. This important event could put additional pressure on the Vancouver rental market at a time when it is likely to be quite tight.

Clayton Research Associates and Woodbridge, Reed and Associates were commissioned by the British Columbia Ministry of Lands, Parks and Housing to examine the outlook for the Vancouver rental housing market over the 1984-1991 period as well as the general rental market impacts of Expo 86. This study is intended to address these issues by examining the following three questions:

- What is the outlook for the Vancouver rental market in terms of vacancy rates, rents and new construction over the 1984-1991 period assuming Expo 86 has no impact?
- What is the likely magnitude, type and timing of the accommodation needs of Expo 86 employees and visitors and what proportion of these needs would it be appropriate to meet through the construction of new rental accommodation?
- Where and what types of new rental units should be built to best serve both the needs of Expo 86 and the demand within the general rental market after Expo 86 is over?

The main body of this report is comprised of six chapters: (1) an analysis of overall population and household growth and the demand

for new housing in the Vancouver CMA (Census Metropolitan Area) over the 1981-1991 period assuming no impact from Expo 86;* (2) an analysis of rental household growth and the demand for additional rental housing in the Vancouver CMA during the same period, again assuming no impact from Expo 86; (3) an analysis of rental housing supply and market conditions in the Vancouver CMA by year over the 1981-1991 decade; (4) an examination of the accommodation needs of employees and visitors to Expo 86; (5) an analysis of the nature and duration of the adjustments in the Vancouver CMA rental market caused by the accommodation needs of the employees and visitors to Expo 86 both during the fair and afterwards; and (6) an analysis of rental demand by geographic sub-market. A technical appendix providing detailed background statistics and technical notes on household growth and the demand for new housing is also included at the end of the main text of the report.

The general approach to formulating projections of total and rental new housing demand in this report is to project the average annual demand over the five year intercensal periods beginning June 1, 1981 and June 1, 1986. These periods were selected because of the timing of the quinquennial Census of Canada and the availability of historical data for the 1971-1976 and 1976-1981 periods from the Census of Canada.** Following presentation of the average annual demand projections for new rental housing for the five year periods 1981-1986 and 1986-1991, an assessment of likely rental market trends by year for the 1981-1991 decade is presented.

The projections and analysis contained in this report are based on many assumptions and judgements about the future which we consider to be realistic at this time. In particular, the impact of inmigration is a key factor affecting rental demand since wide fluctuations have occurred in this variable in the past, mainly as a result of changing economic conditions. At the macro level, the pattern of mortgage interest rates has profound implications for housing demand in total and by tenure. The forecast of visitors

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* The Vancouver CMA was considered to be a superior geographic base for the study than either the Greater Vancouver Regional District (GVRD) or the Lower Mainland because crucial Census of Canada data are more readily available for the CMA boundaries. The CMA includes all the municipalities in the GVRD (the cities of Vancouver, New Westminster, North Vancouver, Port Coquitlam, Port Moody and White Rock; the district municipalities of Burnaby, Coquitlam, Delta, North Vancouver, Richmond, Surrey and West Vancouver; the villages of Belcarra and Lion's Bay as well as the University Endowment Lands and Indian Reserves) and, in addition, both the district municipality and city of Langley and the district municipalities of Maple Ridge and Pitt Meadows.

** Unless otherwise noted, all references to five year periods relate to the period beginning and ending June 1 of the boundary years.

to Expo 86 is also very important in determining the demand for rental units during the period of the fair. Based upon discussions with officials from both Expo 86 and the provincial Ministry of Tourism, a base case market forecast of roughly 16.5 million visits to the fair has been utilized. This level of visits would appear to represent a reasonable target for planning purposes.

It must be recognized that it is not possible to predict the future with precise accuracy. Hence, it is recommended that the performance of Vancouver's rental market and expectations regarding the number of visitors to Expo 86 be monitored closely over the next two years to assess the continued appropriateness of the projections and analysis and, if necessary, to modify the conclusions of the study.

AN ANALYSIS OF OVERALL POPULATION AND HOUSEHOLD GROWTH AND TOTAL DEMAND FOR NEW HOUSING IN THE VANCOUVER CMA

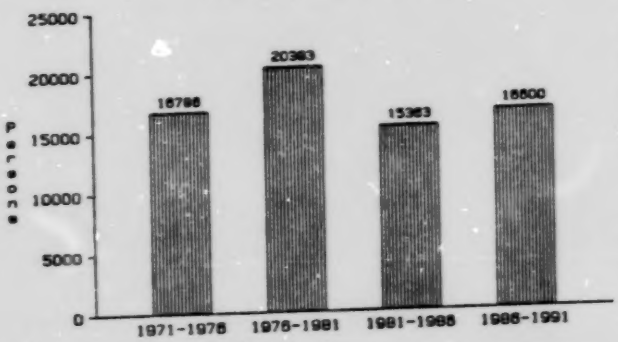
This chapter examines recent trends and presents projections of population growth by age group, overall household growth and the total demand for new housing in the Vancouver CMA over the 1981-1991 decade.

POPULATION GROWTH

Slower Population Growth in 1980s than in 1970s

The base population projections for this study were adapted by Clayton Research Associates from recent projections prepared by the Greater Vancouver Regional District (GVRD) Development Services Department for the GVRD, an area which is slightly smaller than the Vancouver CMA.* The projections assume population growth in the Vancouver CMA will occur at a slightly lower rate than for the province as a whole. As a result, it is projected that the share of the province's population located in the Vancouver CMA (and the GVRD) will continue to decline moderately - as it did during the 1971-1981 period. In modifying the GVRD projections to apply to the CMA, account was taken of the fact that stronger growth can be expected in some of the developing fringe areas of the CMA which, although they are not included in the GVRD, do account for a share of Vancouver's overall growth.

AVERAGE ANNUAL POPULATION GROWTH
VANCOUVER CMA, 1971-1991



Source: Appendix Table 1.

While it is expected that population growth in the Vancouver CMA will average almost 16,000 persons annually in the 1980s, it is not likely to match the very strong performance of the last half of the 1970s. Population growth in the 1981-1986 period is expected to average 15,363 persons annually, down from the 20,383 person average growth experienced during 1976-1981. In the latter half of the 1980s, growth is expected to increase slightly to an average of 16,600 persons annually.

* The GVRD's total population in 1981 was 92.2 percent of the population of the Vancouver CMA.

By 1991, the population of the CMA is projected to total 1,428,000 people, up from 1,268,185 in 1981.

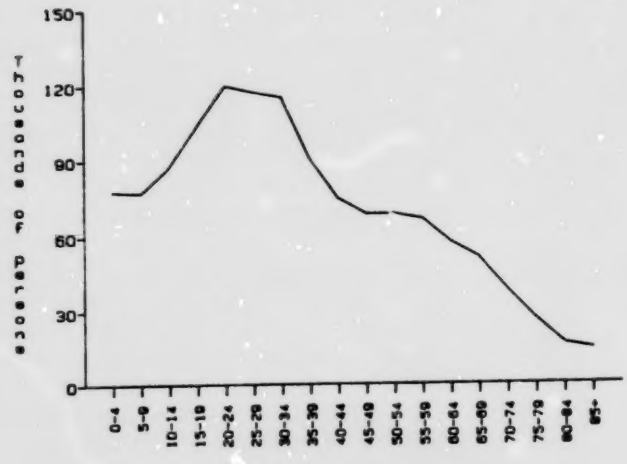
While overall average population growth is projected to increase only slightly between the 1981-1986 and 1986-1991 periods, the components of this growth are significantly different. Net migration is expected to account for a larger proportion of population growth in the latter half of the 1980s than in the first half. Comparable figures for the CMA are not available, but for the GVRD projections on which the CMA projections are based, net migration and natural increase (births minus deaths) account for approximately equal shares of growth in 1981-1986. In the subsequent five-year period, net migration into the GVRD is projected to increase while the level of natural increase declines.

These changes in the components of population growth have a significant impact on the volume and nature of household growth and housing demand. As opposed to newborns, who represent a potential demand for housing some 20 years or more in the future, migrants represent an immediate spur to housing demand because they tend to be comprised either of established households or of single persons in the prime household formation age groups.

Baby Boom Generation Moves into 30-49 Age Groups in 1980s

The age structure of the population in all parts of Canada has been significantly influenced by the changes that have occurred in the fertility rate over the past half century: low in the 1930s, rising in the early 1940s through to the late 1950s and declining throughout the latter 1960s and the 1970s. These fertility changes have left an unmistakeable imprint on the age structure of all population centres in the country - including the Vancouver CMA.

DISTRIBUTION OF POPULATION BY AGE GROUP
VANCOUVER CMA, 1981



Source: Appendix Table 1.

The baby boom population born in the 1940s and 1950s has left the most significant mark. In 1981, this segment of the population was aged 20-39 years. By 1991, they will be 30-49 years old.

Since the numbers of people in the age groups both preceding and following the baby boom population are not nearly as large, the aging of this population has had a profound impact on housing markets in the past two decades. This influence will continue to be of significance in the 1980s as well.

AVERAGE ANNUAL POPULATION GROWTH BY AGE GROUP
VANCOUVER CMA, 1971-1991, THOUSANDS

Age Group	Actual 1971-1976	Actual 1976-1981	Projected 1981-1986	Projected 1986-1991
0-4	-1.3	1.0	1.9	0.1
5-9	-2.4	-1.1	0.3	2.0
10-14	-0.9	-2.0	-1.7	0.6
15-19	2.5	-0.6	-3.0	-1.4
20-24	2.2	2.5	-1.9	-3.1
25-29	4.8	1.9	2.4	-2.0
30-34	3.8	5.7	1.5	2.8
35-39	1.2	4.0	5.3	1.8
40-44	0.2	1.6	3.4	5.6
45-49	-0.1	0.3	1.3	3.6
50-54	1.5	0.2	0.0	1.5
55-59	0.5	1.6	0.0	0.3
60-64	1.9	0.7	1.4	0.3
65+	2.9	4.6	4.5	4.5
Total	16.8	20.4	15.4	16.6

Source: Appendix Table 1.

During the decade of the 1980s as a whole, the 30-49 age groups (the baby boom population) will be the fastest growing groups in the Vancouver CMA. There will also be substantial growth in the senior citizen segment of the population over this decade continuing the pattern of the latter 1970s.

Offsetting the growth in these age groups, there will be a significant decline in the numbers of people aged 10-24 during 1981-1986 and persons aged 15-29 in 1986-1991. These declines have important ramifications for both the overall housing market in general and the rental market in particular. The 20-29 age groups are the prime household formation age groups and also households with heads in these age groups have a relatively high propensity to rent rather than own their dwelling.

HOUSEHOLD GROWTH

The demand for new housing and the type of new housing demanded in any area is heavily dependent on both the increase in the total number of households and the characteristics of those households in terms of age of head and household type. This section examines overall household growth in Vancouver by age of household head.

Factors Behind Household Growth

The most common method of formulating projections of household growth is to apply household headship rates to the projected popu-

lation by age group.*

Household headship rates increased across Canada in the 1960s and 1970s. Factors behind the increase in headship rates have been many and varied. They include:

- Greater affluence, especially on the part of the young and old who, by the late 1970s more than ever before, had the financial means to support a separate household;
- Changing lifestyles which led many single people to occupy separate households where in the past they might have doubled up with other individuals, lived with parents or boarded;
- Increased numbers of divorces and separations which led to the split-up of families, often into two separate households; and
- Government support programs which either provided subsidized dwellings or supplemented the incomes of families and individuals, thereby allowing them to maintain a separate household.

It appears highly likely that this trend towards increasing headship rates was arrested by the downturn in the economy in 1981-1982; some age groups in fact appear to have experienced modest declines in headship rates. With employment having actually fallen (even now, employment is lower than three years ago), uncertainty about job prospects for many of those still working and reduced real incomes over the past two or three years, many people (particularly the young) who might normally have moved into their own dwelling unit appear to have remained with their parents or shared accommodation with friends.

The worst is now over and the effects of the recession can be expected to recede over the remainder of the period to 1986. How-

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* Household headship rates refer to the proportion of the population in a given age group who are household heads. An increase in the household headship rate occurs when new households are formed; for example, the divorce of a married couple could result in the formation of two separate households where previously there was only one. Prior to the 1981 Census, household age groups were defined by the age of the "household head". In the 1981 Census, household age groups were defined by the age of the "household maintainer". The maintainer is considered to be the person in the household who is principally responsible for managing the household's financial affairs. The slight change in definition is not considered to be significant to the analysis here.

ever, with the likelihood of only modest real income gains in the next few years and the impact of higher real rents in British Columbia, it is unlikely that household headship rates will be higher in 1986 than in 1981. In fact, given the projections of continuing high unemployment among the young, there is a strong argument in favour of a drop in household headship rates occurring in these age groups between 1981 and 1986.

The argument in favour of decreasing household headship rates in the younger age groups is supported by some recent work in the United States which suggests that there is reason to expect that headship rates of unmarried younger adults may decline in the 1980s. To quote:

> "During the 1980s, adults in their mid- to late-20s represent the tail end of the baby-boom generation. Since their older siblings have already moved out, those who delay marriage will likely find it easier to remain in their parents' homes because of the availability of surplus space. For those in the leading edge of the baby boom in the late 1970s and early 1980s, the opposite was true: the presence of many younger brothers and sisters created pressure to leave the parental home as soon as possible. Throughout the remainder of this century, the relative absence of young children and the larger housing units occupied by empty nest households may encourage an increase in two-generational households made up of both young adults and their parents, and the middle-aged and the elderly."*

For the purposes of this study, with the exception of the under 30 age groups, it is projected that household headship rates in 1986 will be the same as the headship rates recorded in 1981 for the Vancouver CMA. For the under 30 age groups, it is assumed that there will be a marginal decline in household headship rates between 1981 and 1986.

A modest rise in headship rates in the 30 and over age group is projected over the 1986-1991 period in response to projected higher levels of employment and real incomes. For the under 30 age groups, a continuing marginal decline is projected.

Appendix Table 2 shows the actual and projected household headship rates for the Vancouver CMA over the 1971-1991 period.

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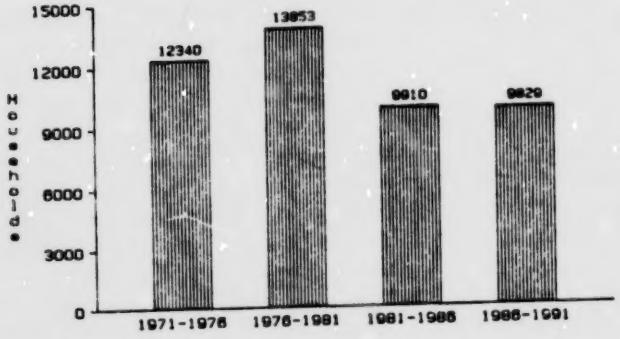
* George Masnick, The Demographic Factor in Household Growth, Joint Centre for Urban Studies of the Massachusetts Institute of Technology and Harvard University, May 1983, pages 11-12.

A Drop in Household Growth in 1981-1986 Followed by Stability in 1986-1991

Applying the projected household headship rates to the projected population by age group yields projections of total households. However, for the purposes of housing demand analysis, it is the growth in households and changes in the ages and types of households that are the important considerations.

Household growth in the Vancouver CMA during the 1980s is projected to fall considerably short of the buoyant growth of the 1970s. Household growth in both the 1981-1986 and 1986-1991 periods is projected to average about 9,900 annually, well below the average of 13,853 recorded annually in the 1976-1981 period.

AVERAGE ANNUAL HOUSEHOLD GROWTH
VANCOUVER CMA, 1971-1991



Source: Appendix Table 3.

Examining the household growth by age of head, it is clear that, over the 1981-1991 decade, there will continue to be major shifts in the age characteristics of heads of households in the Vancouver CMA just as there have been over the past decade. In the 1970s, the majority of the household growth in the Vancouver CMA occured in the 25-39 age cohort (the baby boom generation) and in the elderly age groups. In the 1980s, households with heads in the 30-49 age group as well as the elderly are projected to be the main growth segments.

AVERAGE ANNUAL HOUSEHOLD GROWTH BY AGE OF HEAD
VANCOUVER CMA, 1971-1991, THOUSANDS

Age Group	Actual 1971-1976	Actual 1976-1981	Projected 1981-1986	Projected 1986-1991
15-19	0.2	0.0	-0.2	-0.1
20-24	1.2	0.9	-0.7	-1.0
25-29	2.5	1.2	1.0	-1.1
30-34	2.3	3.3	0.8	1.6
35-39	0.8	2.6	3.0	1.1
40-44	0.4	1.0	1.9	3.2
45-49	0.3	0.5	0.7	2.1
50-54	1.0	0.5	0.0	0.9
55-59	0.3	1.0	0.0	0.2
60-64	1.2	0.3	0.8	0.2
65+	2.1	2.6	2.6	2.7
Total	12.3	13.9	9.9	9.8

Source: Appendix Table 3.

One major difference between the two decades has important ramifications for rental housing demand. The number of households with heads under 30 years of age is actually projected to decline during the 1980s. Households with heads in these age groups have a greater tendency to rent than heads aged 30 or more; these young renters comprise a significant proportion of the total demand for rental housing (more than one-third in 1981).

TOTAL DEMAND FOR NEW HOUSING

While household growth represents by far the largest component of the demand for new housing, there is another component of demand as well - net replacement demand.

Net replacement demand consists of new units which are required to replace dwellings demolished, converted to non-residential use or otherwise removed from the dwelling stock. This component of total housing demand is "net" since it must also take account of the number of new dwelling units created through the conversion of non-residential buildings into dwellings and the creation of additional dwelling units in existing residential structures. Each net dwelling unit lost from the present dwelling stock must, in the final analysis, be replaced by either a new unit or one from the stock of vacant dwellings.

Differences between actual housing completions and the combination of household growth and net replacement demand are reflected in changes in the size of the stock of vacant dwellings.*

Annual Net Replacement Demand of 1,700-1,800 Units Projected for 1981-1991

There is little reliable information on the various components of net replacement demand. A study prepared for CMHC in 1979 estimated that total demolitions in the Vancouver CMA averaged approximately 1,800 units annually in the 1968-1977 period.** Conversions are very difficult to estimate because some are undertaken without official approval and, in recent years, conversion activity in some larger Canadian cities has been offset by the deconversion of older houses (which had been converted to multiple housing) back into their original single-detached unit form.

A reconciliation between Census of Canada vacant and occupied dwelling data and CMHC's housing completions data suggests that net replacement demand averaged approximately 1,650 units annually in the 1971-1981 period. For the projections presented here, it is assumed that net replacement demand will average 1,700 units per year over the 1981-1986 period rising to an average of 1,800 units annually in 1986-1991. The slight rise from 1971-1981 levels is due to the expected increased impact of deconversions.

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* An allowance for vacancies is not considered to be a source of new housing demand here. While many housing demand analyses treat it as such, in this study it is treated as a residual resulting from the interplay of housing market forces.

** Viscber Skaburskis, Planners, Demolitions Conversions and Abandonments, Working Paper 1, August, 1979, pages 19 and 43.

Vacant Stock Declined Significantly During 1976-1981

Vacancies are an important element in the housing market because if the vacant stock is at or below some minimum number, normal household mobility and new household formation are hampered.

It would appear that there was a significant drop in the number of vacant housing units in the Vancouver CMA between the 1976 Census and the 1981 Census.* Census data indicate a drop of almost 5,500 units in the vacant stock over that five year period - from 4.4 percent of the total stock in 1976 to 2.7 percent of the total stock in 1981 (see Appendix Table 4). CMHC apartment vacancy survey results show an even more dramatic drop over a similar period - from 1.3 percent in April, 1976 to 0.2 percent in April, 1981 for vacancies in rental apartment structures of six or more units.

Available data indicate that there has been a substantial increase in the vacant stock in Vancouver since the 1981 Census. CMHC reported an apartment vacancy rate of 2.6 percent in the Vancouver CMA in April, 1984. There has also been an increase in the volume of MLS listings since mid-1981.

Average Annual Demand for New Housing Projected to Total 11,600 Units in Both 1981-1986 and 1986-1991

Combining the projections of household growth and net replacement demand presented in the previous sections yields projections of the total demand for new housing.

The average annual new housing demand projected for the Vancouver CMA over both the 1981-1986 and 1986-1991 periods is just over 11,600 units, well below the average of 15,400 units annually demanded in 1976-1981.

The main reason behind the lower demand for new housing in the 1980s is the anticipated reduction in new household formation - the major component of the demand for new housing. Average annual household growth is projected to drop by almost 30 percent in 1981-1986 from 1976-1981 due to lower net migration levels and

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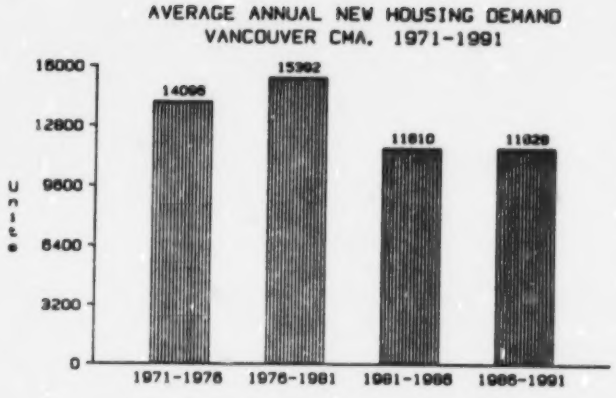
* According to the Census of Canada, vacant dwellings refer to dwellings which are unoccupied on Census day, and in which no person is permanently residing. These would include unoccupied dwellings owned by companies for use by business visitors and unoccupied dwellings normally occupied by temporary residents such as students who are permanent residents elsewhere. The Census definition of vacancy is much broader than the definition used by CMHC in its rental apartment vacancy survey.



Source: Appendix Table 3 and Clayton Research Associates.

stable and, in the younger age groups, slightly declining household headship rates.

During 1986-1991, higher net migration and the resumption of slight growth in household headship rates in the over 30 age groups is not projected to be sufficient to offset the fact that fewer people are in the prime household formation age groups and that household headship rates among the under 30 age groups will be declining. As a result, household growth is expected to be virtually unchanged from the level projected for the 1981-1986 period.

Net replacement demand is projected to increase slightly from the 1976-1981 experience in both 1981-1986 and 1986-1991.

After a substantial decrease in the size of the stock of vacant dwellings in the 1976-1981 period, there appears to have been an increase in the past two years. It is expected that much of the currently available vacant stock will be absorbed by 1986.

COMPONENTS OF AVERAGE ANNUAL NEW HOUSING DEMAND AND SUPPLY
VANCOUVER CMA, 1971-1991, UNITS

	Actual		Projected	
	1971-1976	1976-1981	1981-1986	1986-1991
New Housing Demand				
Household Growth	12,340	13,853	9,910	9,829
Net Replacement Demand	1,756	1,539	1,700	1,800
Total	14,096	15,392	11,610	11,629
Supply*				
New Housing Completions	15,125	14,298	n/a	n/a
Supply from Vacant Stock	-1,029	1,094	n/a	n/a
Total	14,096	15,392	n/a	n/a

* Projections of the total supply of housing from new completions and reduced vacancies were not made in this study. Projections have been made of future rental housing supply (see page 38).

Source: Census of Canada, CMHC and Clayton Research Associates.

AN ANALYSIS OF THE DEMAND FOR NEW RENTAL HOUSING IN THE VANCOUVER CMA

This chapter examines recent trends in the Vancouver rental market and presents projections of renter household growth and the demand for new rental housing in the CMA during the 1981-1991 decade.

RENTER HOUSEHOLD GROWTH

The projections of renter household growth prepared for this report build on the projections of total household growth by age of household head presented in the previous chapter. Projecting renter household growth is a two stage process. The first stage is to disaggregate the household growth of each age group into the various household types which each have differing propensities to rent or own. The second stage is to project these propensities for 1986 and 1991 based on past Census data and anticipated future trends. This methodology produces projections of total renter households by age of head and type as well as the growth in the number of renter households by these characteristics.

Non-Family Households Accounted for Most Household Growth in the 1976-1981 Period

Traditionally, housing analysts have generally undertaken their demand analyses solely in terms of households by age of head. However, with increasing household diversity, it is useful to disaggregate the age groups into household types as well since housing tenure choices differ significantly for each of the various types of households.

For the purposes of the analysis here, four types of households are distinguished:

- Non-family households - one or more unrelated persons living together in a dwelling unit;
- Husband and wife families without children at home - this category includes common-law couples;
- Husband and wife families with children at home (regardless of the child's age); and
- Lone-parent and other households - a male or female with children at home (regardless of age) and households comprised of two or more families occupying one dwelling.

The composition of households by type in the Vancouver CMA is changing dramatically. Between 1976 and 1981, over half the total household growth in the Vancouver CMA was comprised of non-family households; less than 10 percent of the total household growth was comprised of traditional husband and wife families with children.

Despite this changing pattern of growth, husband and wife families with children still accounted for the largest share of all household types in the Vancouver CMA in 1981. However, the share of non-family households was almost as large.

HOUSEHOLDS BY TYPE
VANCOUVER CMA, 1976-1981

Household Type	1981		Average Annual Increase 1976-1981	
	Households	Percent	Households	Percent
Non-Family	154,385	32.4	7,274	52.5
Husband-Wife Families:				
Without Children	119,220	25.0	3,549	25.6
With Children	160,495	33.7	1,304	9.4
Lone-Parent and Other	42,660	8.9	1,726	12.5
Total	476,780	100.0	13,853	100.0

Source: Appendix Table 6.

This pattern of household growth and the overall profile of Vancouver's households is not unique - they closely mirror the experience of the country as a whole. The reasons for the marked growth in non-family households during the 1976-1981 period appear to be basically the same as those contributing to higher household headship rates - namely, changing lifestyles, government subsidy programs and an increased number of divorces and separations. Another important factor was, of course, the strong growth of the 20-34 age segment of the population.

There is a definite relationship between household types and the age of the household head. Thus, the shifts in households by age of head which occurred in the 1970s and which will continue in the 1980s have an impact on the household type profile:

- Very young households tend generally to be non-family households;
- Following marriage (including common-law arrangements), couples without children constitute a larger proportion of the 20s age segment;
- Husband and wife families with children dominate the household types in the 30-54 age segment;
- Couples without children once again re-emerge in importance in the 50 and over age groups as children grow up and leave home;

- Non-family households also once again increase in significance beyond the age of 55 due to the death of spouses; and

- Lone-parent and other households are present in all age groups but reach their zenith in the 40-44 age segment.

HOUSEHOLDS BY TYPE AND AGE OF HEAD
VANCOUVER CMA, 1981, PERCENT

Age Group	Non-Family	Husband-Wife Families Without Children	Husband-Wife Families With Children	Lone-Parent and Other	Total
15-19	70.4	18.7	4.5	6.4	100.0
20-24	56.8	27.9	9.7	5.6	100.0
25-29	40.2	27.9	24.5	7.4	100.0
30-34	28.0	17.7	43.9	10.4	100.0
35-39	19.7	10.9	57.3	12.1	100.0
40-44	16.0	8.8	61.4	13.8	100.0
45-49	15.8	12.3	59.0	12.9	100.0
50-54	19.6	21.4	47.4	11.6	100.0
55-59	25.6	34.2	30.7	9.5	100.0
60-64	32.6	42.7	18.0	6.7	100.0
65+	50.9	40.3	5.1	3.7	100.0
Total	32.4	25.0	33.7	8.9	100.0

Source: Appendix Table 5.

These various groupings of households by household type and age of head all have differing propensities to own or rent their dwelling - this will be explored in detail in a later section.

A Shift in Household Growth Away from Non-Family Households Expected in the 1980s

The simplest method of projecting households by type and age of head would be to merely apply the 1981 percent distributions in the above table to the projections of total households by age of head for the years 1986 and 1991. Such an approach would however neglect clear evidence of past changes in the relative importance of the various types of households by age group and several trends which appear likely over the remainder of the decade.

The broad assumptions used to generate projections for the 1981-1991 period of households by type for each age group are:

- The projected decline in household headship rates in the under 30 age groups is expected to impact individuals who, in the past, might have been expected to form their own (non-family) households. Therefore, the proportion of non-family households in the under 30 age groups is projected to be lower in 1986 than it was in 1981. In 1991, it is projected that there will have been a further reduction in the non-family proportion of total households in these age groups.

- In the 1976-1981 period, there was a swing to non-family households in all the 20 plus age cohorts, especially the 20-44 age groups. While some declines are expected in the non-family proportions of the under 30 households, very slight increases are projected for the 30-44 non-family age groups over the 1981-1991 period. The proportion of non-family households in the older age groups (45 and over) is projected to remain approximately unchanged from the 1981 Census figures.

- There was a shift across all age groups away from husband and wife (with children) households during the 1976-1981 period. For the 1981-1991 decade, it is assumed that this general trend continues but at a reduced rate with one major exception: the relative importance of husband and wife with children households in the 25-29 and 30-34 age groups stabilize at their 1981 values due to more women in these age groups having children.

- During the 1976-1981 period, there was relative stability in the husband and wife households without children in all age groups. Except for the under 30 age group where some increase can be expected because of the relative decline in importance of non-family households, no significant shifts are projected in the share of this household type.

- Lone-parent and other households increased their relative shares in all age groups under 65 years during the 1976-1981 period. It is generally assumed that this trend will continue in the 1980s.

The resulting projections of household growth by household type show a pronounced swing back to husband and wife with children households during the 1981-1991 decade as compared to the latter 1970s. This shift takes place mostly at the expense of non-family households.

AVERAGE ANNUAL HOUSEHOLD GROWTH BY HOUSEHOLD TYPE
VANCOUVER CMA, 1976-1991

		Husband-Wife Families			
	Non-Family	Without Children	With Children	Lone-Parent and Other	Total
Average Annual Growth					
1976-1981	7,274	3,549	1,304	1,726	13,853
1981-1986	2,730	2,375	3,756	1,049	9,910
1986-1991	2,127	1,809	4,676	1,217	9,829
Percent Distribution					
1976-1981	52.5	25.6	9.4	12.5	100.0
1981-1986	27.5	24.0	37.9	10.6	100.0
1986-1991	21.6	18.4	47.6	12.4	100.0

Source: Appendix Table 6.

The composition of this household growth by age of household head during the 1981-1991 decade will also be quite different from that experienced in the 1976-1981 period (see Appendix Table 6). For example, household growth of both non-families and families without children is projected to be dominated by the elderly and 30-49 age groups. There are also projected to be fewer non-family households and families comprised of a husband and wife without children with heads aged less than 30 years in 1991 than in 1981. The fastest growing age groups for husband and wife families with children are projected to be the 30-49 age groups.

Tenure Patterns Vary for Different Types of Households

The pattern of housing tenure (the own/rent choice) is very closely related both to the age of the household head and to the household type.

In terms of age of household head, there is generally a three stage housing tenure lifecyle:

HOUSEHOLDS BY AGE OF HEAD AND TENURE
VANCOUVER CMA, 1981, PERCENT

Age Group	Owners	Renters	Total
15-19	6.5	93.5	100.0
20-24	13.6	86.4	100.0
25-29	34.4	65.6	100.0
30-34	55.2	44.8	100.0
35-39	67.9	32.1	100.0
40-44	73.1	26.9	100.0
45-49	75.8	24.2	100.0
50-54	74.7	25.3	100.0
55-59	72.6	27.4	100.0
60-64	69.6	30.4	100.0
65+	58.1	41.9	100.0
Total	58.5	41.5	100.0

Source: Appendix Table 8.

- Newly-formed young households typically live in rental accommodation;
- Once households are firmly established, ownership becomes the prevalent tenure; and
- When children leave home or a spouse dies, many households with older aged heads tend to sell their homes and move into rental accommodation.

Housing tenure is also closely related to household type:

HOUSEHOLDS BY HOUSEHOLD TYPE AND TENURE
VANCOUVER CMA, 1981, PERCENT

Household Type	Owners	Renters	Total
Non-Family	29.1	70.9	100.0
Husband-Wife Families:			
Without Children	64.6	35.4	100.0
With Children	82.7	17.3	100.0
Lone-Parent and Other	56.5	43.5	100.0
Total	58.5	41.5	100.0

Source: Appendix Table 8.

- Husband and wife families with children have a very high propensity for homeownership;
- Husband and wife families without children also have a healthy propensity for ownership though less than two parent families with children;
- Non-family households have by far the lowest propensity for ownership; and

- Slightly more than half of the lone-parent and other households lived in owner-occupied dwellings in 1981.

The fact that much of the household growth during the 1980s will be centred in the 30-49 age cohort suggests that demographic factors will not be positive for rental housing demand. However, this influence will be partially countered by the strong growth of elderly households which have a greater propensity for rental accommodation than those in the baby boom age cohorts.

The expected swing in the characteristics of household growth to husband and wife families with children and away from non-family households in the 1981-1991 decade is also a negative factor for the rental segment of the housing market.

Economic Factors to Favour Homeownership in 1980s

The foregoing analysis indicates a likely shift in housing preferences towards ownership housing in the 1980s because of demographic factors. There is evidence as well that economic factors may further strengthen the shift towards ownership household growth in the Vancouver CMA over the years to 1991. There are two major economic factors that would cause such a shift:

- Improved affordability and the general perception of homeownership as a good investment; and
- Rising real rents in both new and existing rental accommodation.

Affordability has improved in Vancouver since 1981 when the combination of high housing prices and high mortgage interest rates led to a situation where very few potential homebuyers could afford to purchase a home.* The average family would have had to spend 27.8 percent of its income if it were to purchase an average-priced MLS home in Vancouver in 1983, assuming financing with a mortgage with a twenty-five year amortization, the average 1983 five-year conventional mortgage interest rate (13.3 percent) and a 20 percent downpayment. At the one-year conventional mortgage rate, the ratio is about 24 percent. Resale homes thus are much more accessible than at any time since 1979, when the proportion

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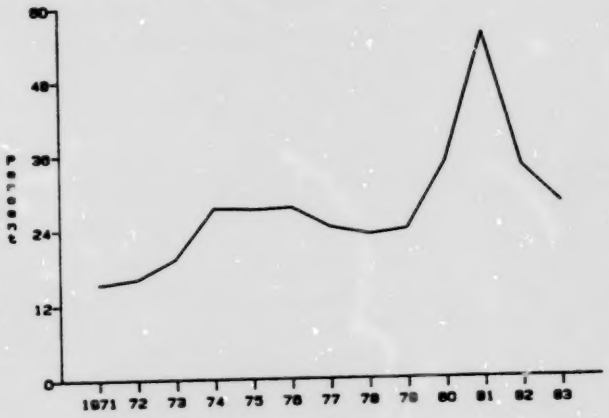
* The ability of homebuyers to afford a home is examined here in terms of the acquisition cost of an average-priced MLS home, the most comprehensive price series available over time. The series refers to Multiple Listings Service (MLS) sales reported by the Vancouver and Fraser Valley Real Estate Boards.

RATIO OF MORTGAGE PAYMENT FOR AN AVERAGE-PRICED MLS HOUSE TO AVERAGE FAMILY INCOME* VANCOUVER, 1971-1983



* Assumes a 20 percent downpayment and a five-year term conventional mortgage.
Source: Appendix Table 7.

was 23.8 percent, and also are approximately as affordable as they were in the mid-1970s. However, affordability is currently far behind what it was in the early 1970s.

Affordability has worsened to some extent in recent months as a result of higher interest rates though prices in the relatively soft resale market have remained stable. Over the remainder of the 1980s, it is assumed that affordability will stabilize, on average, at a level similar to that experienced during 1983. This is based on the assumption that, on average, house prices and incomes will rise at approximately the same rate over the period and that, on average, five-year mortgage interest rates will not be significantly above current levels during the remainder of the 1980s. The interest rate assumption is, of course, critical to the affordability scenario upon which the analysis in this report is based.

The investment motive was a prime consideration in the eyes of homebuyers in the housing booms of both the early 1970s and the 1979-1981 period. In 1981-1982, the combination of high interest rates, sagging house prices, increasing unemployment and negative press about the perils of homeowners losing their jobs or facing large payment increases at mortgage renewal led to serious questions in the minds of potential homebuyers about the value of homeownership as an investment. These doubts were strengthened by the relative bargain rents (despite the low vacancy rates) that were available and the existence of government programs (i.e., MURB, ARP and CRSP) which subsidised the production of new rental housing.*

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* The MURB (Multiple Unit Residential Building), ARP (Assisted Rental Program) and CRSP (Canada Rental Supply Plan) were all Federal Government subsidy programs designed to support the construction of private rental housing. The Province also supplemented the assistance available under the Federal ARP program from 1976 through to early 1978.

COMPARISON OF AVERAGE RENTS AND MORTGAGE PAYMENTS
VANCOUVER, 1971-1983

	1971	1979	1981	1983
Average Monthly Gross Rent				
Dollars	140	266	361	419
Percent Increase Since 1971	n/a	90	158	199
Monthly Mortgage Payment on Average MLS House				
Dollars	156	552	1,632	949
Percent Increase Since 1971	n/a	254	946	508

Source: Appendix Tables 7 and 11 and estimates by Clayton Research Associates.

Even allowing for the distorting effect of the escalation in house prices in 1981, it is clear that the carrying costs associated with purchasing an average-priced MLS single-detached house increased much more rapidly than average rents over the period since 1971.

That situation is now at an end. Increases in rents in the existing rental stock over the next few years in combination with cutbacks in government subsidies for new rental construction, should significantly alter the relative attractiveness of owning versus renting in Vancouver.

In summary, it is expected that there will be a small relative shift in all household groups by age and type of household in favour of those choosing to own their dwelling rather than rent between 1981 and 1991. In general, this should serve to continue the trend towards increased homeownership levels which was evident in most household types and age groups over the 1976-1981 period (see Appendix Table 8). The exceptions to this trend in 1976-1981 were husband and wife families (both with and without children) with heads aged 20-29 where the affordability difficulties of the time no doubt led to the lower incidence of homeownership for these groups revealed by the 1981 Census of Canada. The anticipated increasing affordability of homeownership (albeit gradual and modest) and rising real rents should serve to reinforce this trend towards increasing ownership incidence.

A Decline in Average Annual Renter Household Growth in the 1980s

AVERAGE ANNUAL HOUSEHOLD GROWTH BY TENURE
VANCOUVER CMA, 1971-1991

	Owners	Renters	Total
1971-1976	7,733	4,607	12,340
1976-1981	7,336	6,517	13,853
1981-1986	6,901	3,009	9,910
1986-1991	8,119	1,710	9,829

Source: Appendix Tables 3 and 9.

Based on the foregoing analysis, renter household growth in the Vancouver CMA is projected to decline in the first half of the 1980s to an average of only 3,009 households annually. This is well below the average annual increase in renter households experienced over the 1976-1981 period.

The main reasons behind this significant drop are the aging of the population away from the prime renter household age groups and increasing real rents.

In 1986-1991, renter household growth is projected to decline further to an average of 1,710 households annually, again due to demographic shifts and rising real rents.

Decline Concentrated in Non-Family Households

AVERAGE ANNUAL GROWTH IN RENTAL HOUSEHOLDS BY HOUSEHOLD TYPE
VANCOUVER CMA, 1976-1991

Household Type	1976-1981	1981-1986	1986-1991
Non-Family	4,844	1,483	810
Husband-Wife Families:			
Without Children	862	573	141
With Children	19	536	384
Lone-Parent and Other	792	417	375
Total	6,517	3,009	1,710

Source: Appendix Table 9.

The marked deceleration in renter household growth projected for 1981-1991 compared to the 1976-1981 period is largest for non-family households.

Average annual growth for non-family renter households is projected at 1,483 and 810 in 1981-1986 and 1986-1991, respectively, considerably below the 4,844 growth recorded in 1976-1981. This group is particularly sensitive to the expected increases in real rents which are likely to accompany the tightening in rental market conditions.

Growth in couples without children, lone-parent and other renter households is also expected to be lower in 1981-1991. On the other hand, renter households consisting of two-parent families with children are expected to increase over the 1981-1986 and 1986-1991 periods by an average of 536 and 384 households per year respectively. This contrasts with a growth of just 19 per year during the 1976-1981 period.

DEMAND FOR NEW RENTAL HOUSING

This section of the report combines the projections of renter household growth presented in the preceeding section with estimates of the amount of demand for new rental housing which can be expected to result from two other sources, namely: net replacement demand and shifts in tenure within the existing housing stock.

Approximately 60 Percent of Net Replacement Demand Assumed to be Rental

Analysis of the tenure of the net losses to the housing stock over time is complicated by the unavailability of reliable data. However, comparison of CMHC completions and vacancy data for 1976-1981 with increases in the occupied housing stock by tenure and the decline in the total stock of vacant dwellings derived from 1976 and 1981 Census data leads to the conclusion that rental housing comprised roughly 60 percent of net replacement demand. The data are not sufficiently detailed or reliable to refine the estimate further. However, 60 percent of net replacement demand for rental housing and 40 percent for ownership housing seems a good working assumption for the 1981-1991 decade as well.

Under this assumption, net replacement demand for rental accommodation will average 1,020 units annually in 1981-1986 and 1,080 units annually in 1986-1991.

Large Tenure Shift in Existing Housing Stock During 1976-1981 to Reverse in 1981-1986

There appears to have been a significant shift in tenure in the existing housing stock during the 1976-1981 period. Many dwellings which would normally be owner-occupied appear to have been rented at the time of the 1981 Census. It seems likely that the Vancouver house price spiral which hit its peak in late 1980, about six months prior to the June, 1981 Census of Canada, may have enticed many investors to purchase homes. Subsequently, when the ownership market started to sag, a large number of these investors appear to have rented their units out on the very tight rental market prevailing at that time, hoping to sell them at a substantial profit in later years.

From rough estimates based on Census of Canada and CMHC data, it would appear that approximately 10,000 units which would normally have been expected to be owner-occupied were rented at the time of the 1981 Census.*

It appears that a significant part of this temporary rental stock has already reverted to owner-occupancy. This could be one cause of the large number of residential MLS listings on the Vancouver

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* Based on the following rough calculation: renter household growth 1976-1981 (32,465) plus estimated rental net replacement demand (4,600) less estimated decline in rental vacancies (4,470) less completions of new rental housing (21,550) less estimated new condominiums rented (1,000) equals approximately 10,000 units.

market over the past three years. For the 1981-1986 period as a whole, it is assumed that an average of 1,000 units per year will revert from rental to owner-occupancy. For the 1986-1991 period, it is assumed that the shift from rental to owner-occupancy within the existing stock will average 500 units annually.

Demand for New Rental Housing to Average Just Over 5,000 Units Annually in 1981-1986 and Less Than 3,300 in 1986-1991

AVERAGE ANNUAL NEW RENTAL HOUSING DEMAND BY COMPONENT
VANCOUVER CMA, 1981-1991

	1981-1986	1986-1991
Household Growth	3,009	1,710
Net Replacement Demand	1,020	1,080
Shift to Ownership in Existing Stock	1,000	500
Total	5,029	3,290

Source: Projections by Clayton Research Associates.

Combining the various demand components, the average demand for new rental housing in the Vancouver CMA over the 1981-1986 period is projected at just over 5,000 units annually. The most significant component of this projected demand is household growth.

In the 1986-1991 period, a further decline in average annual new rental housing demand is projected. A significant drop in renter household growth compared to 1981-1986 and the fact that a smaller volume of tenure shifts within the existing stock is assumed for this period are the main factors behind the projected decline in new rental demand.

AN ANALYSIS OF RENTAL HOUSING SUPPLY AND MARKET CONDITIONS IN THE VANCOUVER CMA

This chapter examines past trends and projects the probable future supply of new rental housing and rental market conditions (as reflected in changing vacancy rates and rents) in the Vancouver CMA. The analysis pays particular attention to the gap between current market rents and so-called economic rents (the level of rent that is needed to induce developers to build new rental accommodation), the response time on the part of developers to more favourable market rents and the ultimate availability of new rental units to the marketplace. The analysis here excludes any impact of Expo 86.

RECENT TRENDS IN RENTAL HOUSING SUPPLY AND MARKET CONDITIONS

This section reviews recent trends in the supply of new rental accommodation, vacancy rates and average rents in the Vancouver CMA.

Annual Private Rental Apartment Completions Averaged 3,450 Units Over Past Seven Years

Accurate figures on the past supply of all types of new rental housing are not available. However, information from a variety of sources can be assembled to provide an overall picture of supply trends in the rental market.

As shown previously, data from the Census of Canada indicated that the number of renter households in the Vancouver CMA climbed by an average 6,517 per year over the 1976-1981 period, up from 4,607 households annually in the preceding five year period. However, renter household growth, while the largest component of rental demand, is not synonymous with the supply of newly-built rental housing.*

Information on the annual number of completions of private rental apartment structures having six or more units is available from

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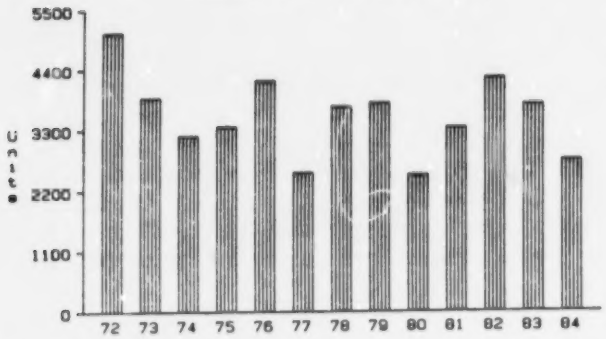
* Part of the demand was satisfied by the occupancy of vacant units (rental apartment vacancy rates fell between 1976 and 1981) and renter occupancy of existing dwelling units which were previously owner-occupied. In addition, demand was created through the net loss of rental units in the existing housing stock through conversions, demolitions, etc.

COMPLETIONS OF NEW PRIVATE RENTAL APARTMENTS
VANCOUVER CMA, 1972-1984*



* Refers to units in rental apartment structures of six or more units completed in the 12 months ending March 31 in the indicated years.
Source: CMHC.

CMHC. This universe represents the largest component of the supply of new rental housing.*

Production of private rental apartment units in structures having six or more units varies somewhat from year to year. Completions were high in the early 1970s (5,082 units in 1972) but declined to 2,500 units in 1977. This decline largely reflected overbuilding in the early 1970s and high interest rates.** Rental apartment completions then increased over the 1978-1984 period, averaging almost 3,450 units per year over the seven years ending March, 1984. Government programs, in particular ARP and MURB, along with low vacancy rates contributed to these higher completions.

With the expiry of MURB and ARP and the termination of interest-free loans under the Canada Rental Supply Plan (CRSP) at the end of 1983, the construction of rental housing will undoubtedly decline until such time as construction once again becomes financially attractive to developers and investors. This could be achieved either through higher market rents or the introduction of new government assistance programs.

At the end of March, 1984, only 2,237 private rental units were under construction in the Vancouver CMA with an additional estimated 1,900 CRSP units approved but not yet started.

Significant Number of Social Housing Starts***

Social housing starts in Vancouver (primarily non-profit and co-operative housing) have been significant in recent years, averag-

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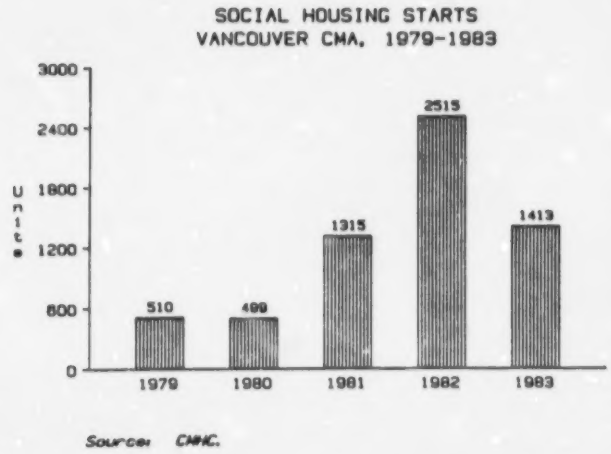
* Private rental apartment construction in structures having six or more units accounted for about half of the total increase in occupied rental housing (including units added from the existing ownership housing stock) over the 1976-1981 period.

** The average annual five year conventional mortgage rate climbed to the 11-12 percent range in 1974-1976 from 9.6 percent in 1973 and 9.2 percent in 1972.

***For the purposes of this study, cooperative housing is treated as rental housing.



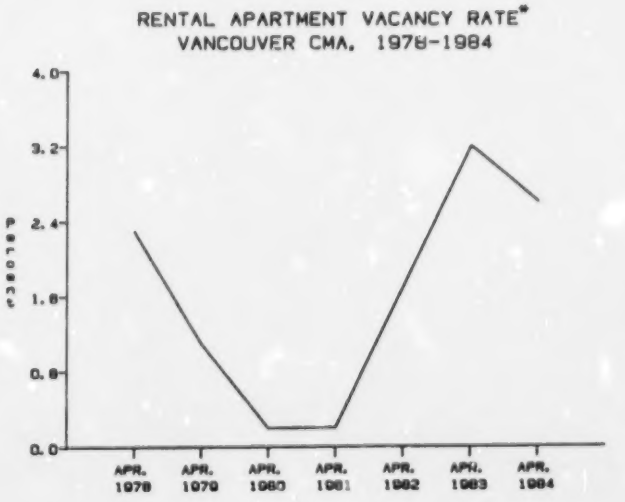
Source: CMHC.

ing around 1,300 units per year since 1979. Social housing starts reached a peak of 2,515 in 1982 before declining in 1983.

The future production of social housing cannot be reliably determined since CMHC's whole strategy of channelling housing assistance to lower income Canadians is presently under review. In fact, there is a question as to whether the non-profit or cooperative housing programs will continue in future.*

For the purposes of the analysis here, it is assumed that there will be 1,300 social housing starts annually between 1984 and 1991 in the Vancouver CMA.

Rental Vacancy Rates Eased During the 1982-1984 Period



* Vacancy rate in privately-initiated rental apartment structures of 6 or more units including newly-built units.

Source: CMHC.

The demand for new rental housing outpaced the supply of new private rental apartments over the 1978-1981 period in spite of the comparatively solid rate of production. The CMHC April vacancy rate in rental apartment structures of six or more units including newly-built structures fell from 2.3 percent in 1978 to a low of 0.2 percent in 1980. The vacancy rate then remained low until 1982 when it reached 1.7 percent. It climbed again by 1983, reaching 3.2 percent before dropping to 2.6 percent in 1984.

* For a critique of these programs see CMHC, Section 56.1 Non-Profit and Cooperative Housing Program Evaluation, November, 1983.

The marked decline in vacancy rates beginning in the late 1970s and the subsequent rise in 1982 and early 1983 were very much related to underlying economic forces which caused demand to outpace the supply of new rental housing. The upswing in the B.C. economy in the 1979 to mid 1981 period produced rapid employment growth and a large influx of migrants. This put severe pressure on the entire housing market in the Vancouver CMA. Consequently, the rental apartment vacancy rate fell dramatically and rents on uncontrolled accommodation began to rise rapidly (information from the Office of the Rentalsman shows annualized average increases in rents in the vicinity of 20 percent on units exempt from controls through 1981 and the early months of 1982). In comparison, the consumer price index for Vancouver increased by 11.0-14.5 percent over this period.

The overall rental apartment vacancy rate was 2.6 percent in April, 1984 compared to 3.2 percent in April, 1983.* This decline was due to increased absorptions and also a lower number of rental apartment completions compared to earlier periods. With the relatively low number of units under construction or expected to be started in the next few years, it seems certain that the vacancy rate will continue to decline.

Moderating Rent Increases Since 1981

Changes in average rents traditionally are the product of fluctuating rental market conditions as well as general inflation.** Since 1974, average rents have also been affected by the provisions of rent control and the decontrol mechanism of the past few years.***

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* The April, 1984 vacancy rate (2.6 percent) is well above the October, 1983 rate of 1.7 percent which was unexpectedly low. While there were good reasons for expecting rental demand to pick-up in the April to October period of 1983 (see pages 26 and 27 of the December, 1983 issue of Housing Quarterly published by the Ministry of Lands, Parks and Housing), it now appears that the October vacancy figure may have overstated rental demand in the Vancouver market.

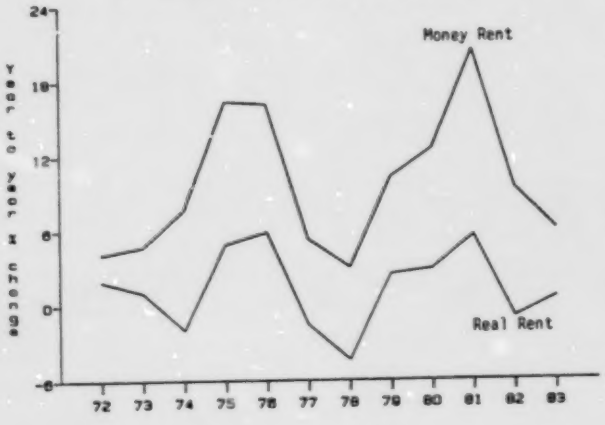
** The rental data in this section refer to average gross rents (i.e., cash rents plus utility payments paid by tenants).

***Rent controls were removed in 1983. Previously, a program of phasing out controls began in 1977. As controlled rents moved above a threshold level (1 bedroom - $300; 2 bedroom - $350 and 3 bedrooms and more - $400) the units were no longer subject to controls.

Estimates of average rents paid by all renters in the Vancouver CMA have been formulated based largely on average rents recorded by the 1971 and 1981 Census of Canada, Statistics Canada's Family Expenditure Survey and the rent index published by Statistics Canada as part of the consumer price index.*

According to this series, average rents increased rapidly in the mid 1970s then decelerated in 1977-1978. The double digit increases in the mid 1970s seem unusually high given that rent controls were implemented in 1974.** The increases appear to reflect the combination of the liberal rent increases permitted under rent controls in these early years as well as the influence of an overall tight market on rents for accommodation exempt from rent controls.

AVERAGE GROSS RENTS
VANCOUVER CMA, 1972-1983*



* Gross rents include cash rent plus utility payments made directly by renters.
Source: Appendix Table 11.

Average rent increases moved once again into the two digit range in 1979 (10.3 percent), then reached 20.5 percent in 1981, but decelerated in 1982 and again in 1983 (to an estimated 6 percent). The sharp rise in 1981 was the result of severe demand pressures placed on uncontrolled rental accommodation in 1980 and 1981 while the subsequent deceleration was due to the overall easing in vacancy rates in 1982 and early 1983.

Average real rents - average money rents deflated by the general inflation rate - experienced a similar pattern to money rents in recent years. Annual increases in average real rents rose from 2.5 percent in 1979 (following a decline of 4.4 percent in 1978) to over 5 percent in 1981. This was followed by a decline in 1982 and a marginal increase in 1983.

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* Average rents for the even numbered years between 1971 and 1981 are from the Family Expenditure Survey. For the remaining years, it was assumed that overall average rent changes were in the same proportion as the comparable change in the rent index. For the years 1982 and 1983, the estimates were based on rent increases as indicated by the rent index.

** Maximum rent increases of 10.6 percent were permitted in 1975 and 1976 compared to 8 percent in 1974. A 7 percent maximum became effective May 1, 1977 which continued until 1980 when the maximum was raised to 10 percent.

COMPARISON OF AVERAGE RENTS IN CONTROLLED AND UNCONTROLLED RENTAL APARTMENTS AND INCREASES IN AVERAGE UNCONTROLLED RENT VANCOUVER CMA, APRIL, 1981-APRIL, 1983

Average Monthly Cash Rents	1 Bedroom	2 Bedroom
1981		
Controlled ($)	255	318
Exempt or Decontrolled ($)	357	473
Ratio	71.4	67.2
1983		
Controlled ($)	279	350
Exempt or Decontrolled ($)	420	544
Ratio	66.4	64.3
Increase 1981-1983 in Uncontrolled Rents (%)	17.6	15.0

Source: CMHC based on information from the Rent Review Commission.

Actual rent levels for newly-built rental housing are not easily determined nor is it possible to readily determine the gap between rents for newer and rent controlled older accommodation.

Data from the Vancouver office of CMHC show that in April of 1983, average cash rents on exempt and decontrolled rental apartments were $420 per month for one-bedroom units and $544 for two-bedroom units.

Superficially, the data would seem to indicate that the gap between average controlled and uncontrolled rents widened over the past two years. This is largely an aberration since a large number of controlled units at the upper end of the rent control ceiling became decontrolled over this period.

With respect to the average rent for newer rental accommodation, it is estimated that the current average market rent for all rental accommodation built since 1976 is $520 per month. This is based upon the average rent for accommodation built between 1976 and 1981 from the 1981 Census of Canada (estimated at $434 per month) and the assumption of a 20 percent increase in rents since June, 1981 for newer accommodation. This estimate includes utility payments paid directly by tenants. It is 24 percent higher than the estimated average gross rent for all rental accommodation including controlled units ($419).

MARKET VERSUS ECONOMIC RENTS

This section presents estimates of average economic rents for new rental accommodation and the size of the gap between these average economic rents, average market rents for new accommodation and average current rents for units which had been subject to rent controls prior to May, 1983.

The Gap Between Market and Economic Rents

A gap has existed since the early 1970s between current or achievable rents for new rental accommodation and so-called economic rents (the rent which is sufficient to induce developers and investors to undertake new rental investment without government

assistance programs). The nature of the gap at present can be illustrated by reference to an analysis prepared by CMHC.* This analysis is illustrative only and should not be taken to be representative of the entire Vancouver CMA marketplace.

The analysis considers the development of a 40 unit (20 one-bedroom and 20 two-bedroom), three storey wood frame apartment building in an inner suburban Vancouver location (e.g., Richmond, Burnaby, New Westminster). The total development costs per unit are estimated at $65,000, comprising $16,250 for land, $39,000 for construction and $9,750 for other costs such as overhead and financing.

Income per unit is estimated at $532.50 per month. This is based upon achieving rents of $450 and $575 per month for the one- and two-bedroom units, respectively, plus $15 per month per parking space and $5 per unit per month for laundry.

The per unit income required by a developer to build this project is considerably higher. The CMHC analysis estimates operating expenses, including management, maintenance, taxes and an allowance for vacancies and bad debts, at $178 per unit. To this is added the mortgage payments associated with a loan equivalent to 80 percent of the per unit cost of $65,000 financed at 12.5 percent with a 25 year amortization ($555).** Even without allowing an explicit return on equity (e.g., the difference between the $65,000 per unit development cost and the $52,000 mortgage loan), the monthly costs per unit would total $733 or 37.7 percent more than the achievable income of $532.50 per unit. If a return on equity equivalent to the mortgage rate is allowed for, the gap widens to 63.0 percent ($868 divided by $532.50).

A developer or investor would undertake this project only if he could foresee (a) future rents rising considerably faster than operating costs which would increase the project's market value and produce a capital gain and/or (b) governments providing tax savings or direct subsidies which close the gap and generate positive rates of return. This latter method was chosen by the Federal Government in its MURB and CRSP programs to stimulate rental housing construction.

The rental construction upturn in the Vancouver CMA, which was reflected in completions beginning in 1978, was initiated by the Federal Government's ARP and MURB programs. With the severe tightening of the rental market in 1980, some investors started to have expectations of future capital gains, but private sector rental construction continued to be largely due to Federal Government initiatives (initially MURB and then the CRSP assistance in 1982 and 1983).

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* David Wilson, Senior Program Appraiser, Vancouver Office, Memorandum entitled "Economic Viability of the Residential Rental Market", September 15, 1983.

** This is a calculation by Clayton Research Associates.

This situation is likely to change over the next several years. With the termination of CRSP at the end of 1983, no direct Federal assistance will be available to promote the construction of new market rental housing (companies in the business of real estate development or management, however, can still deduct the capital cost allowance against other income).* Moreover, based on recent experience, investors are unlikely to harbour expectations of significant capital gains on new rental projects for several years to come. Under this scenario, the vast majority of developers and investors will require market rents to rise sufficiently to allow for an explicit competitive rate of return on their equity before being willing to invest in new rental accommodation in the Vancouver CMA (assuming that no new initiatives to stimulate private rental construction are introduced).

It might well be that development costs for new rental accommmodation will be less in future years than has been the case recently. It has been argued that much of the benefit from the MURB program was capitalized in the value of land, thus pushing up land values.** To the extent this is true, it would also apply to the CRSP program. With the elimination of these programs, the cost of multiple housing land should decline in the future. Secondly, many MURB developers packed their costs with all sorts of extras such as the costs of cash flow guarantees. These will not be included in future rental projects. Thirdly, with the deterioration of the economy from the boom conditions of 1979-1980, developers may be able to reduce their labour costs. And lastly, the quality of rental accommodation can be reduced; e.g., less elaborate amenities and smaller unit sizes.

For all these reasons, future development costs (in terms of constant 1983 dollars) should be lower than they have been in the recent past. However, the impact of these lower costs will be offset in part by the need for an explicit rate of return on equity (for the analysis here, this is assumed to be the same as the five-year mortgage interest rate).

Two separate calculations have been made - at total development costs of $50,000 per unit and $60,000 per unit (the average unit is a composite of all new rental housing built, i.e., all sizes of apartments and townhouses). The economic rent associated with the $50,000 unit cost is 26 percent higher and the economic rent of

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* Comparatively little of the rental housing built in the Vancouver area in recent years has been built by real estate companies intending to hold the units in their own portfolio.

** G.W. Gau and A.P. Wicks, Impact of the ARP and MURB Programs on the Vancouver Housing Market, University of British Columbia, January, 1982.

CALCULATION OF AVERAGE MONTHLY ECONOMIC RENTS
VANCOUVER CMA, DOLLARS

	Development Costs	
	$50,000 per Unit	$60,000 per Unit
Operating expenses plus allowance for vacancies and bad debts*	125	125
Mortgage payments on an 80 percent mortgage at 12.5 percent over 25 years	427	513
Return on equity (12.5 percent)	104	125
Total	656	763
Rounded to	655	765

* Operating expenses include taxes, insurance, heating and maintenance.

Source: Clayton Research Associates.

the $60,000 unit cost is 47 percent higher than the estimated average monthly market rent for newer accommodation in the overall Vancouver CMA presented previously ($520). For the analysis here, it is assumed that the economic rent associated with average per unit development costs of $50,000 is appropriate.*

Economic rents were very much affected by the large-scale amendments introduced to the Canadian income tax structure in 1972. The tax advantages available to individuals investing in rental housing prior to 1972 were superior to those available even under the now defunct MURB tax shelter provisions. The 1972 tax changes had a pronounced effect on after-tax rates of return for individual investors in rental property.** It has been estimated the tax changes caused the after-tax rate of return for individuals investing in a sample of rental apartments to fall from a pre-1972 average of 57 percent to 13 percent.*** The same study concluded:

> "Individuals will still be hard hit, however, and, accordingly, a significant reduction in the inflow of funds into rental housing could take place in Quebec, with lesser but still significant reductions occurring in British Columbia, the Prairies and the Atlantic provinces." (page 471)

If the pre-1971 tax provisions affecting investment in rental housing by individuals were still in effect, it is clear that

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* This gap between average market and economic rent is a working assumption only. The size of the gap will differ by unit type and sub-market area. Moreover, the required economic rent will vary among developers and investors according to their individual circumstances and motivations. For the purposes of this analysis, an average mortgage interest rate of 12.5 percent is assumed for the remainder of the 1980s.

** These returns include both operating income and capital gains.

*** Frank A. Clayton, "Bill C-259: Is there a conflict with Canada's Housing Goals?" Canadian Tax Foundation, Twenty-Third Tax Conference, 1971, page 469.

average economic rents would be lower today. The magnitude is difficult to quantify without a detailed analysis. However, a preliminary estimate suggests that average economic rents in Vancouver could perhaps be up to $100 per month lower if the 1972 tax changes had not been implemented.

RESPONSE TIME BETWEEN LOW VACANCY RATES AND ACCELERATING REAL RENTS

The gap between current average market rents for new rental accommodation (assuming no government subsidies) and average economic rents has been estimated previously at 26 percent. The question addressed here is the length of time it is likely to take for average market rents on new units to reach their economic level once the rental vacancy rate falls to a very low level.

Average Real Rents Respond Within One to Two Years to Low Vacancy Rates in Uncontrolled Markets

An historical data series of average gross rents paid by renter households in the Vancouver CMA covering the 1963 to 1983 period has been created.* This series relates to all renters whether in controlled or uncontrolled accommodation. To remove the impact of general inflation, the rent series has been deflated by the consumer price index for the Vancouver CMA. Yearly percent changes in average real rents are compared to CMHC's April vacancy rate in privately-initiated rental apartment structures of six or more units.** For consistency, the vacancy rate series excludes structures completed in the six months prior to the survey month as these data were unavailable prior to 1972.

The behavior of the rental market in the Vancouver CMA has been highly cyclical over the past twenty years with three complete cycles occurring:

- The first cycle ran from mid 1964 to mid 1971.

  The vacancy rate fell from 4.7 percent in 1964 to 1.5 percent in 1966 and remained in the 1.0-1.5 percent range for four years. The rate then climbed to 2.7 percent in 1970 and 4.1 percent in 1971.

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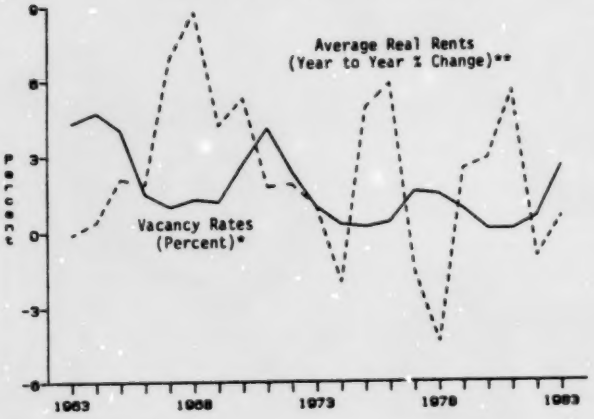
* Page 31 discusses briefly how the series was derived.
** Prior to 1975, the CMHC apartment vacancy rate relates to the month of June.

- The second cycle ran from mid 1971 to late 1977.

  The vacancy rate fell from 4.1 percent in June, 1971 to 0.6 percent in December, 1972. The rate did not climb above 1 percent until April, 1977. The rate in both April and October, 1977 was 1.6 percent.

RENTAL VACANCY RATES AND AVERAGE REAL RENTS
VANCOUVER CMA, 1963-1983



* Vacancy rates in privately-initiated rental apartment structures of 6 or more units in April of the year shown excluding newly-completed.
**Average rents pertaining to the entire rental housing stock.
Source: Appendix Table 11.

- The third cycle ran from late 1977 to April, 1983.

  The vacancy rate fell from 1.6 percent in October, 1977 to 0.9 percent in April, 1979 and remained significantly below 1 percent until October 1982 when it rose to 1.9 percent. The rate peaked at 2.6 percent in April, 1983 before starting another decline.

For each cycle, there was a one to two year lag between the time vacancies reached a low level and the time average real rents began to accelerate.

The decline in the vacancy rate in June, 1966 to 1.5 percent was followed by a 6.9 percent rise in average real rents in 1967 while the decline in the vacancy rate to 1.0 percent in June, 1973 was followed by a 4.9 percent rise in average real rents in 1975 and a 5.9 percent rise in 1976. In the third cycle, average real rents increased by 5.6 percent in 1981 following a decline in the vacancy rate to 0.1 percent in April, 1980.

The general conclusion that emerges therefore is that average real rents in an uncontrolled rental market are likely to respond in a significant way to a low vacancy rate situation with a one to two year time lag.*

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* The length of this lag may be increased under current circumstances by the provincial regulation that rents may be raised only once per year.

FUTURE MARKET RENTS FOR NEW RENTAL HOUSING

Elimination of Rent Controls Might Delay Increases in Market Rents on New Accommodation

All types of rental accommodation in the Vancouver CMA, regardless of age, location or amenities are part of the same overall market. The imposition of rent controls in 1974 had the effect of creating two rental submarkets - a rent controlled market and an uncontrolled market. However, these two sub-markets have not operated independently of one another. While separate in terms of rent levels, they are intimately connected as part of the overall rental market.

A recent study prepared by the staff of the Ontario Ministry of Municipal Affairs and Housing argues that rent controls stimulate total rental demand because controlled units become underpriced compared to the rents that would prevail under a scenario of no controls.* This increased demand results in upward pressure on the rents for uncontrolled accommodation and enlarges the gap between controlled and uncontrolled rents. In fact, the study argues that there is an inverse relationship between controlled and uncontrolled rents under conditions of low vacancies. When controls are removed, the higher rents on previously controlled units reduce total rental demand and, thus, reduce the pressure on rents on previously uncontrolled units.

The study quantifies the relationship between future real rent increases for controlled and uncontrolled units in the Toronto and London CMAs (which are low and high vacancy rate areas, respectively), under various allowable rent increase scenarios on controlled units as well as a scenario which has controls removed. Two scenarios (decontrol and control with a 9 percent guideline) are presented here to show the relationship between controlled and uncontrolled rents and their behavior under alternative scenarios. The figures presented cannot be taken to apply directly to the Vancouver CMA.

In both market areas, under the 9 percent guideline, real uncontrolled rents rise more rapidly in 1982-1984 than controlled rents. However, under the decontrol scenario (decontrol is assumed to be initiated in 1981), the opposite happens - real rents rise faster in the previously controlled units and by a lesser

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* Ontario Ministry of Municipal Affairs and Housing, The Impact of Rent Review on Rental Housing in Ontario: A Staff Research Report, Toronto, July, 1982.

AVERAGE ANNUAL INCREASE IN REAL RENTS UNDER ALTERNATE SCENARIOS
TORONTO AND LONDON CMAS, 1982-1984, PERCENT

	Alternative Scenarios	
	9 Percent	
Toronto CMA	Guideline	Decontrol
Controlled Rents 1982-1984	- 0.6	+14.4
Uncontrolled Rents 1982-1984	+16.3	+ 5.1
London CMA		
Controlled Rents 1982-1984	- 0.4	+ 2.0
Uncontrolled Rents 1982-1984	+ 2.4	+ 0.6

Source: Ontario Ministry of Municipal Affairs and Housing, The Impact of Rent Review on Rental Housing in Ontario: A Staff Research Report, July, 1982.

amount in the previously uncontrolled units than under the 9 percent guideline scenario. These results are controversial since they go against the commonly held view that the removal of controls should cause some shift in demand to previously uncontrolled units and hence, increase the rents of these units.

The implication of the Ontario analysis for the present study, if it is in fact correct, is that the elimination of rent controls could impede to some extent the rise in real rents on new accommodation that would have happened in response to declining vacancy rates over the next year or two.

RENTAL MARKET OUTLOOK TO 1991

This section examines the overall rental market outlook for the Vancouver CMA over the period up to 1991. The emphasis is on determining the number of new market rental units which are likely to be built by the private sector in the absence of new government assistance programs and any impact from Expo 86.

Supply Outstrips Demand in 1981-1983

It was previously projected that demand for new rental housing would average around 5,000 units per year over the period running from mid 1981 to mid 1986.* It has also been shown that rental apartment vacancy rates climbed sharply over the April, 1981-April, 1983 period before falling over the past year. The April, 1984 rate stood at 2.6 percent compared to 0.2 percent in April, 1981.

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* Demand refers to new rental units required to satisfy renter household growth, net replacement demand and a shift to ownership tenure of some single-family houses and condominiums which had temporarily been available for rental.

This rise in rental vacancy rates was mainly due to the large number of rental units completed in 1981-1983, though demand was also below the average annual projection for the 1981-1986 period. Total completions of new rental housing are estimated at 6,734 units in the 12 months ending May, 1982 and 7,424 units in the 12 months ending May, 1983. In the ten months to the end of March, 1984, however, rental completions dropped to an estimated 4,108 units.

Approximately two-thirds of these units were built by the private sector (mostly under the MURB and CRSP program). Most of the remainder were social housing units with a small number in condominiums (it is assumed that one-quarter of newly completed condominiums become part of the rental stock).

COMPLETIONS OF NEW RENTAL HOUSING
VANCOUVER CMA, 1981-1984, UNITS

	Private Rental*	Non-Profit and Cooperative	Estimated Rental Condominiums	Total
June 1981-May 1982	4,915	1,176	643	6,734
June 1982-May 1983	4,630	2,485	309	7,424
June 1983-March 1984	2,681	1,217	210	4,108

* Includes strata-titled MURB buildings.

Source: CMHC and rental condominium estimates by Clayton Research Associates.

The supply/demand relationship for the rental market during the two year period beginning in mid 1981 is shown in the next table. Some comments on the construction of this table are in order prior to analyzing the data. For June 1, 1981, the stock is derived by adding the vacancies associated with a 0.2 percent vacancy rate to the number of renter-occupied dwellings reported by the 1981 Census. The total stock of rental housing as at June 1, 1982 and June 1, 1983 is calculated by adding completions during each 12 month period to the stock at the beginning of the period.

In estimating vacancies, it has been assumed that CMHC's April vacancy rate for rental apartment structures of six or more units is applicable to the CMHC surveyed rental stock but that the vacancy rate on the older CMHC surveyed stock (i.e., units completed more than 18 months before each vacancy survey) is broadly representative of the remainder of the rental stock. Demand is calculated by adding completions during each 12 month period to vacancies at the beginning of the period and subtracting vacancies at the end of the period.

RELATIONSHIP BETWEEN RENTAL HOUSING DEMAND AND SUPPLY
VANCOUVER CMA, 1981-1983

	Rental Stock* June 1	Rental Completions in 12 Months Ending May	Rental Vacancies June 1	Rental Demand in 12 Months Ending May	Rental Vacancy Rate** June 1	Average Real Market Rent for New Units Year-to-Year Percent Change
	Units				Percent	
1981	198,302	-	447		0.2	n.a.
1982	205,036	6,734	2,247	4,934	1.1	7.5
1983	212,460	7,424	5,360	4,311	2.5	-3.0

* The stock has not been adjusted to account for net losses.
** The vacancy rate refers to the entire stock of rental accommodation which is more inclusive than the coverage of CMHC's rental apartment vacancy survey.

Source: Census of Canada, CMHC and estimates by Clayton Research Associates.

Based upon the estimation procedures described above, the demand for new rental housing is estimated to have been 4,934 units in the 12 months ending May, 1982 and 4,311 in the 12 months ending May, 1983. Annual demand for the two years averaged 4,622 units, about 8 percent less than the average annual demand projected for the 1981-1986 period as a whole. Estimated average real rents for new units increased in 1981-1982 but declined in 1982-1983 in response to vacancy rates moving above the 2 percent range.

Rental Vacancy Rate Projected to be Low From 1986 Through 1988

Once all the units started under the CRSP program have been completed, there is expected to be a hiatus in new private rental completions. This should persist until real rents rise sufficiently to attract investor interest in the production of new rental projects. In this period, social housing (assumed to be 1,300 units per calendar year between 1984 and 1991) and units made available for rent in new condominium projects (assumed to be 250 units per year) will comprise a more significant share of the total new rental supply.

How long will the hiatus last? The answer depends on the speed with which the current gap between market and economic rents for new accommodation is reduced and the perceptions of developers and investors on the merits of investing in new rental projects.

The scenario here is that the vacancy rate will drop to low levels by mid 1986. Average real market rents should then begin to rise significantly in 1987 and accelerate in 1988 and 1989. As the gap between market and economic rents gets narrower, developers should begin to start new rental projects with resulting higher completions in 1989-1991. Under this scenario, vacancy rates should start to return to a more normal range in 1990 with the result that the rate of increase in real rents should slacken. Vacancy

rates should rise further in 1991 to 2.0 percent which should lead to a drop in rental completions in the period after 1991. Again, it should be noted that this scenario assumes no impact from Expo 86.

RELATIONSHIP BETWEEN RENTAL HOUSING DEMAND AND SUPPLY
VANCOUVER CMA, 1983-1991

	Rental Stock* June 1	Rental Completions in 12 Months Ending May	Rental Vacancies June 1	Rental Demand in 12 Months Ending May	Rental Vacancy Rate** June 1	Average Real Market Rent for New Units Year-to-Year Percent Change
	Units				Percent	
1983	212,460	7,424	5,360	4,311	2.5	-3.0
1984	217,100	4,640	4,900	5,100	2.3	+1.0
1985	220,900	3,800	3,200	5,500	1.4	+2.0
1986	223,700	2,800	700	5,300	0.3	+3.0
1987	226,400	2,700	400	3,000	0.2	+5.0
1988	229,300	2,900	300	3,000	0.1	+7.0
1989	233,300	4,000	1,000	3,300	0.4	+7.0
1990	238,300	5,000	2,500	3,500	1.0	+4.0
1991	244,300	6,000	4,850	3,650	2.0	0.0

* The stock has not been adjusted to account for net losses.
** The vacancy rate refers to the entire stock of rental accommodation which is more inclusive than the coverage of CMHC's rental apartment vacancy survey.

Source: Projections by Clayton Research Associates.

Under this scenario, total private rental completions are projected to rise from an average of 1,150-1,350 units in 1986-1988 to approximately 4,500 units in 1990-1991.

COMPLETIONS OF NEW RENTAL HOUSING
VANCOUVER CMA, 1983-1991, UNITS

	Private Rental	Non-Profit and Cooperative	Rental Condominiums	Total
June 1983-May 1984	2,930	1,460	250	4,640
June 1984-May 1985	2,275	1,300	225	3,800
June 1985-May 1986	1,270	1,300	230	2,800
June 1986-May 1987	1,150	1,300	250	2,700
June 1987-May 1988	1,350	1,300	250	2,900
June 1988-May 1989	2,450	1,300	250	4,000
June 1989-May 1990	3,450	1,300	250	5,000
June 1990-May 1991	4,450	1,300	250	6,000

Source: Projections by Clayton Research Associates.

EXPO 86 AND THE DEMAND FOR RENTAL HOUSING AND TEMPORARY ACCOMMODATION IN THE VANCOUVER CMA

This chapter of the report examines the demand for rental accommodation in the Vancouver CMA that is expected to be generated by the employees of the Vancouver World's Fair (Expo 86), as well as the demand for and supply of temporary accommodation for visitors to Expo 86.

RENTAL MARKET IMPACTS OF EMPLOYMENT GENERATED BY EXPO 86

The additional demand for rental housing in the Vancouver CMA as a result of employees of Expo 86 is considered here in terms of employment generated in three areas:

- Construction - the rental demand stemming from the employment created during the physical preparation of the Expo 86 facilities;
- Management and entertainment - the rental demand stemming from the Expo 86 pavilion staff from other parts of Canada and other countries as well as from entertainers; and
- Operations - the rental demand stemming from the employees required to run Expo 86 and to meet the anticipated needs of visitors to Vancouver at the time of the fair.

Little Rental Market Impact from Construction

A study conducted by Currie, Coopers and Lybrand for Expo 86 projected that the provision of infrastructure, site preparation and the construction of buildings and facilities associated with Expo 86 would create a total of 7,600 person years of employment in British Columbia.* Since this study was completed, the total British Columbia employment estimate has been revised upwards to 11,000 person years to reflect changes in the construction program and budget. This employment estimate breaks down into three main categories:

- Direct Employment - representing manufacturers of components, providers of transportation services and on-site construction jobs - totalling 4,000 person years;

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* Currie, Coopers and Lybrand, An Assessment of the Potential Economic Benefits from Expo 86, April, 1983.

- Indirect Employment - representing suppliers of raw materials and related transportation, financial and business services - totalling 3,800 person years; and

- Induced Employment - representing providers of goods and services to the families of the direct and indirect employees - totalling 3,200 person years.

The direct and indirect employment impacts can be expected to run more or less concurrently with the actual construction of the Expo 86 facilities while the induced economic activity and resultant employment are expected to extend beyond the construction period as spending impacts work their way through the economy. Based on the current Expo 86 construction schedule, the total 11,000 person years of employment generated within British Columbia should occur largely during 1984 and 1985. Most, though not all, of these jobs will be located in the Vancouver area.

TOTAL EMPLOYMENT GENERATED BY THE CONSTRUCTION OF EXPO 86 FACILITIES BRITISH COLUMBIA, 1984-1985, PERSONS

	1984	1985
Average Employment		
1st Half	4,400	7,400
2nd Half	6,600	3,600
Annual Average	5,500	5,500

Source: Estimates by Woodbridge, Reed and Associates.

According to the Expo 86 construction schedule, employment should be fairly evenly split between the two years, with the majority of the employment being created in the last half of 1984 and the first half of 1985. As a result of likely construction delays and lags in the economic system, it seems probable that these figures should be treated as maximums for 1984 and 1985 - some of the actual employment impact seems likely to spill over into the first half of 1986.

It appears that this volume of additional employment can easily be accommodated by the unemployed labour force already resident in the Vancouver area. At the end of the first quarter of 1984, the Vancouver and Burnaby District offices of Employment and Immigration Canada had 20,600 job-ready unemployment insurance claimants (excluding maternity and sickness leave) in the categories of construction trades, primary processing, secondary manufacturing and materials handling. Over 8,700 of those registered were in the construction trades.

Labour force and employment projections for the Vancouver CMA indicate that unemployment rates of over 10 per cent would likely prevail in both 1984 and 1985 if Expo 86 was not being held. Therefore, it is expected that virtually all the jobs associated with the construction of Expo 86 facilities could be filled by persons now residing within the Vancouver area. Although a few key jobs in specialized professions or trades may accrue to individuals from outside the region, the construction of the Expo 86 facilities should not generate any significant incremental demand for rental housing.

BASE LINE LABOUR FORCE AND EMPLOYMENT
VANCOUVER CMA, 1984-1986*

	1984	1985	1986
Labour Force (000's)	712	733	754
Employment (000's)	630	655	675
Unemployment (000's)	82	78	79
Unemployment rate (%)	11.5	10.6	10.5

* Assuming no impact from Expo 86.

Source: Woodbridge, Reed and Associates.

Peak Pavilion Management and Entertainment Accommodation Requirements to Total Over 1,600 Units

Expo 86 intends to lease rental accommodation for pavilion staff and the entertainers who will appear under contract at special events sponsored by Expo 86. Expo has made a commitment to the City of Vancouver that it will not lease from landlords who would displace existing tenants in order to provide for Expo's needs. That is, Expo 86 will lease only new apartment units and accommodation that would normally be vacant during the summer months such as student housing at the University of British Columbia.

For out-of-town pavilion staff (national, provincial, corporate and theme pavilions), Expo 86 has issued an invitation for proposals for the provision of approximately 800 apartment units starting in November, 1985 and ending in November, 1986. Expo will arrange for these units to be furnished and maintained and intends to sub-let them to the pavilion operators. It is anticipated that all pavilion staff will be accommodated under this program.

The housing program for entertainers and related persons participating in special events sponsored by Expo 86 covers only the six month period of fair operation. From May to October, 1986, Expo plans to lease an additional 200 apartment units in the Vancouver area for these people. In addition, during the May to August period, vacant student housing at UBC will be leased, an estimated 319 rooms will be held under contract for the full period with an additional 310 rooms being taken during May and June.

EXPO 86 LEASING REQUIREMENTS FOR
PAVILION STAFF AND ENTERTAINERS
VANCOUVER CMA, 1985-1986

Type and Class of Accommodation	1985		1986					
	Nov.	Dec.	Jan.-Mar.	Apr.	May-June	July-Aug.	Sep.-Oct.	Nov.
Apartment Units								
Pavilion staff	75	150	150	800	800	800	800	750
Entertainers	-	-	-	-	200	200	200	-
Total	75	150	150	800	1,000	1,000	1,000	750
UBC Housing	-	-	-	-	629	319	-	-
Total	75	150	150	800	1,629	1,319	1,000	750

Source: Expo 86.

It is possible that some additional temporary accommodation of a type similar to that provided by UBC could be required for the months of September and October when students re-occupy the UBC residences.

Significant Employment Impacts from Operational Phase

The Currie, Coopers and Lybrand study presented estimates of the employment which would be generated in British Columbia by various numbers of visitors to Expo 86.* As is discussed in the next section, the base line projection of visits to Expo 86 utilized in this study is 16.5 million. The total British Columbia employment impact from these visitors is estimated at 44,500 person years.

For the purposes of calculating the Vancouver CMA component of this provincial employment impact and the allocation of the employment by month within the year 1986, the following assumptions were made:

- On-site and off-site direct employment will be in proportion to fair visits as projected on a monthly basis (May to October).
- Start-up and close-down employment will occur in the months of April and November both on and off-site.
- Indirect employment will commence three months prior to the May, 1986 opening and will continue for three months after the fair closes.
- Much of the induced employment impact will not occur in 1986 because the large numbers of students and housewives working at Expo can be expected to save a significant proportion of their earnings for expenditure after the fair is over. For the purposes of this analysis, it is assumed that only half the induced employment occurs in 1986 and this expenditure commences in July, 1986.
- All of the on-site direct employment and 70 percent of the off-site direct employment will accrue to the Vancouver CMA.

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* Currie, Coopers and Lybrand, An Assessment of the Potential Economic Benefits of Expo 86, April, 1983. Two employment estimates presented in the report were based on 15 and 17 million visitors (37,600 person years and 46,800 person years) respectively; prorating these employment estimates for 16.5 million visitors yields 44,500 person years of employment.

- Eighty-five percent of the indirect and induced employment will be in the Vancouver CMA.

- All of the employment impacts of the operational phase of Expo 86 will result in net new jobs, i.e., there will be no increased overtime or underutilized capacity in the base line employment projections for 1986 presented on page 45. As is discussed later, this assumption (adopted here for simplicity) is unlikely to hold, therefore net employment will be less than that shown.

Based on these assumptions and the total employment impact forecasts of the Currie, Coopers and Lybrand study, the timing and distribution of 1986 provincial and Vancouver CMA employment resulting from Expo 86 have been calculated.

AVERAGE EMPLOYMENT BY QUARTER RESULTING FROM OPERATION OF EXPO 86 VANCOUVER CMA AND BRITISH COLUMBIA, 1986, THOUSANDS

	Vancouver CMA					Total British Columbia				
	Direct					Direct				
	On-Site	Off-Site	Indirect	Induced	Total	On-Site	Off-Site	Indirect	Induced	Total
Average Employment										
1st Quarter	0	0	8.4	0	8.4	0	0	9.9	0	9.9
2nd Quarter	19.2	14.6	12.6	0	46.4	19.2	20.9	14.8	0	54.9
3rd Quarter	33.8	26.8	4.2	5.0	69.8	33.8	38.3	4.9	6.0	83.0
4th Quarter	5.4	4.8	0	5.0	15.2	5.4	6.8	0	6.0	18.2
Annual Average	14.6	11.5	6.3	2.5	34.9	14.6	16.5	7.4	3.0	41.5

Source: Currie, Coopers & Lybrand, Expo 86, Woodbridge, Reed & Associates and Clayton Research Associates.

The projections suggest that 84 per cent of the employment created in B.C. by Expo 86 will accrue to the Vancouver CMA.

The peak additional employment created by Expo 86 in Vancouver is estimated to be in the third quarter of 1986 with a total of almost 70,000 jobs. Adding these onto the base line employment and labour force projections presented on page 45 would cause the unemployment rate in the Vancouver CMA to decline to about 1 percent. But this is too simplistic an analysis for two major reasons:

- One of the simplifying assumptions behind the analysis of Expo 86 employment impacts was that all employment would result in net additional jobs. This assumes that there is no underutilized capacity in the local economy to absorb additional output either through overtime or simply higher productivity with existing staff - it seems likely that the actual number of new on-site, off-site, indirect and induced jobs created will be less than that indicated.

- As the Currie, Coopers and Lybrand study points out, it is reasonable to expect that the size of the local labour force will increase temporarily as a result of Expo 86 as

students and housewives (among others) take advantage of the opportunity for temporary employment. According to the study, some 23,000 temporary employees were secured locally for the 1976 Olympic Games in Montreal.

For these reasons, it seems likely that the vast majority of the new employment created in the Vancouver CMA as a result of Expo 86 will be able to be filled by the local labour force. Nonetheless, there is little doubt that several thousand people will be attracted to Vancouver by the temporary jobs available at Expo.

Assessing the accommodation needs of these mostly temporary migrants is difficult. It seems likely that many of them will be students and that many of them will be living with friends or relatives for their short Vancouver stay. Some will seek tenting or trailer facilities. It seems likely that relatively few will be seeking conventional rental accommodation since that would mean setting up an entire separate household with all the furniture and other equipment that entails. The vast majority of those who do seek rental accommodation will likely be sharing with one or more other students or single people.

For the purposes of planning for the rental demand likely to result from the influx of workers for the operational side of Expo 86, it seems unlikely that such demand would total more than 250 units.

DEMAND FOR VISITOR ACCOMMODATION

This section examines the extent to which visitors to Expo 86 may be unable to obtain transient accommodation at commercial and other establishments in the Vancouver CMA and environs, including hotels, motels, campgrounds, trailer parks and bed and breakfast outlets, and the resulting pressure that could be placed on the rental market.

Base Case Accommodation Demand for 3.9 Million Nights

The impact of Expo 86 visitors on accommodation demand in the Vancouver area will be a function of the following parameters:

- Total projected visits to the Expo 86 site.
- Proportion of visits made by non-residents, in particular those who require overnight accommodation in the Vancouver

area. Some non-residents (i.e., visitors from Victoria and Washington State) may be able to make 'day trips' to the site.

- Degree to which non-residents use commercial accommodation (hotels, motels, bed and breakfast, trailer or recreational vehicle parks/campgrounds) rather than non-commercial facilities (primarily the homes of friends and relatives).

- Average party size staying in commerical accommodation. It is anticipated that average party size will increase as summer approaches and will decline after Labour Day as children return to school.

- Average stay (number of nights) per party in commercial accommodation. This can be linked to the number of visits to the site, with some allowance for visitors staying longer to enjoy other attractions in the Vancouver area.

- 'Base' accommodation requirements for visitors to Vancouver who do not visit the Expo 86 site. Typically, these would be for individuals who are in Vancouver for business or personal reasons and who have neither the time nor inclination to visit Expo 86.

The projected total number of visits to the site is a function of the propensity of both the resident and non-resident populations to visit Expo 86 and the average number of site visits per person. Depending upon the assumptions employed, a wide range of projected total visits can be derived. Estimates have in fact varied from a low of approximately 13 million visits to as high as 20-28 million visits, although these latter levels would require some very optimistic assumptions to be realized.

Based upon discussions with officials from both Expo 86 and the provincial Ministry of Tourism, a base case market forecast of just under 16.5 million visits has been utilized. This level of visits represents a reasonable target for planning purposes.

In order to translate this level of visits into an accommodation demand, assumptions must also be made with respect to the other parameters noted above. In general, the assumptions utilized here are consistent with those used by either Expo 86 or the Ministry of Tourism for internal review and planning purposes.

It is projected that over 11 million Expo 86 visits will be made by people living outside Vancouver. Allowing for the fact that most of the visitors will be in families or couples and that a number will be staying with friends, etc., the commercial and campground/trailer park accommodation requirements for these visitors are estimated at a total of almost 3.9 million nights. This requirement includes 'base' accommodation for visitors to Vancouver who do not visit the Expo 86 site.

VISITORS AND ACCOMMODATION REQUIREMENTS
EXPO 86, THOUSANDS

Total Visits	
Local Population	5,481
Out-of-Town	11,010
Total	16,491
Accommodation Requirements*	
Commercial	3,494
Campground/Trailer Parks	369
Total	3,863

* Includes 'base' accommodation for Vancouver visitors not attending Expo 86 and excludes visitors staying with friends or relatives.

Source: Expo 86, Ministry of Tourism and estimates by Clayton Research Associates.

DAILY VISITOR ESTIMATES
EXPO 86

Local Population	
Peak Day	80,500
Average Day	33,000
Minimum Day	13,500
Out-of-Town	
Peak Day	92,500
Average Day	66,500
Minimum Day	49,500
Total Visits	
Peak Day	161,000
Average Day	99,500
Minimum Day	69,000

Source: Projections by Clayton Research Associates.

In order to model variations in accommodation requirements over time, monthly and weekly visitor distribution profiles supplied by Expo 86 staff were utilized.*

Utilizing the projections of out-of-town visits and factoring out visitors staying with friends and relatives, the requirements for commercial accommodation (hotels and motels, bed and breakfast) and for campgrounds and trailer parks were derived for peak day, average day and minimum day.**

The average number of visits to the fair per day throughout its operation is estimated at 99,500 comprised of 33,000 local residents and 66,500 out-of-town visitors. During the five and one-half months when Expo 86 is in operation, the number of out-of-town visits is estimated to range from a minimum of 49,500 per day to a maximum of 92,500.

The peak accommodation requirement for both Expo 86 and other visitors is projected to be 30,900 including both commercial accommodation as well as campgrounds and trailer parks. This peak is expected to occur in August - the month with the highest projected attendance for Expo 86. The average daily accommodation requirement for the fair is estimated at 23,250 units.

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* These distribution profiles facilitated the calculation of expected visits to Expo 86 for each day of each month the fair is in operation. Some adjustment, however, was necessary to allocate visits between the local population and out-of-town visitors. In effect, it is assumed that local population visits will be concentrated during the weekends, resulting in a much more even distribution of visits by non-local residents.

** No attempt was made to vary the ratio of commercial accommodation demand to campground and trailer park demand over time, although the latter component might assume greater importance during the summer months.

EXPO 86 AND OTHER VISITORS
DAILY ACCOMMODATION REQUIREMENTS

Commercial Accommodation	
Peak Day	28,000
Average Day	21,000
Minimum Day	15,750
Campgrounds/Trailer Parks	
Peak Day	3,250
Average Day	2,250
Minimum Day	1,500
Total Accommodation	
Peak Day	30,900
Average Day	23,250
Minimum Day	17,500

Source: Projections by Clayton Research Associates.

Over 90 percent of the accommodation required is projected to be for commercial (hotel or motel type) rooms.

The peak months for accommodation requirements are expected to be July and August when demand is projected to average 23,900-25,750 daily for commercial accommodation and 2,700-2,900 daily for campgrounds and trailer parks.

AVERAGE DAILY ACCOMMODATION REQUIREMENTS BY MONTH
EXPO 86 AND OTHER VISITORS

Month	Commercial Accommodation	Campgrounds/ Trailer Parks	Total
May	18,600	1,800	20,400
June	20,100	2,100	22,200
July	23,900	2,700	26,600
August	25,750	2,900	28,650
September	17,400	1,900	19,300
October*	21,000	1,900	22,900

* October 1-13 only.

Source: Projections by Clayton Research Associates.

Daily Commercial Accommodation Supply in Catchment Area Estimated at 18,400-19,150

The estimates of supply for both commercial accommodation and campgrounds and trailer parks used in this study are consistent with those generated by consultants to Expo 86.* These consultants have estimated that total commercial accommodation available on a typical day would be 23,330 rooms (including rooms in Seattle for day tours, Hope, Bellingham and Victoria) while campgrounds and trailer parks could supply a total of 2,900 sites. For the purposes of this study, there were some variations in the estimates of supply compared with those of the Expo 86 study:

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* Expo Transportation Study, Technical Memorandum No. 1, Distribution of Design Day Visitor Accommodation, November 1, 1983.

- The primary catchment area utilized in this study is slightly larger than that employed by Expo 86 (see map on next page).

- Whereas the Expo 86 study included all non-registered (or unlisted) hotel and motel units within its primary catchment area, the estimates prepared for this study include only those establishments which: (1) had previously been listed in the Ministry of Tourism's Accommodation Guide as late as 1980 or (2) which could be reasonably expected to upgrade to tourist standards by 1986. Excluded, therefore, are many downtown and east-side 'hotels' which are primarily residential in character and which cater to low-income residents.*

- No deduction has been made for regular business visitors, since the accommodation demand projections include provision for such individuals.

- UBC and British Columbia Institute of Technology on-campus accommodation for visitors is assumed to be 50 rooms in May and 130 rooms in June, July and August based on discussions with student housing officials in these institutions. In contrast, Expo 86 consultants utilized an estimate of 640 rooms available for visitors; however, the majority of these rooms have been reserved by Expo 86 for the use of entertainers and staff (see page 45).

- The campground and trailer park supply is assumed to be 3,500 sites, compared to the 2,900 sites used in the Expo 86 study.

The Expo 86 estimates for rooms in new hotel facilities, bed and breakfast and off-campus accommodation within the primary catchment area, plus the Expo 86 total estimates for Whistler Village, Hope, Bellingham, Victoria and Seattle were accepted for use in this study. However, the estimates of available accommodation used in this study also include hotel and motel facilities in Agassiz and Harrison, located just north of the catchment area as defined here.

Based upon these assumptions, the commercial stock within the catchment area varies from an average of 18,400 per day during September and October to an average of 19,150 per day for the months of June, July and August. The addition of Whistler would add a further 1,900, Agassiz/Harrison 500, Hope/Bellingham/Victoria 2,150 and Seattle day tours 2,700 - a total of 7,250.

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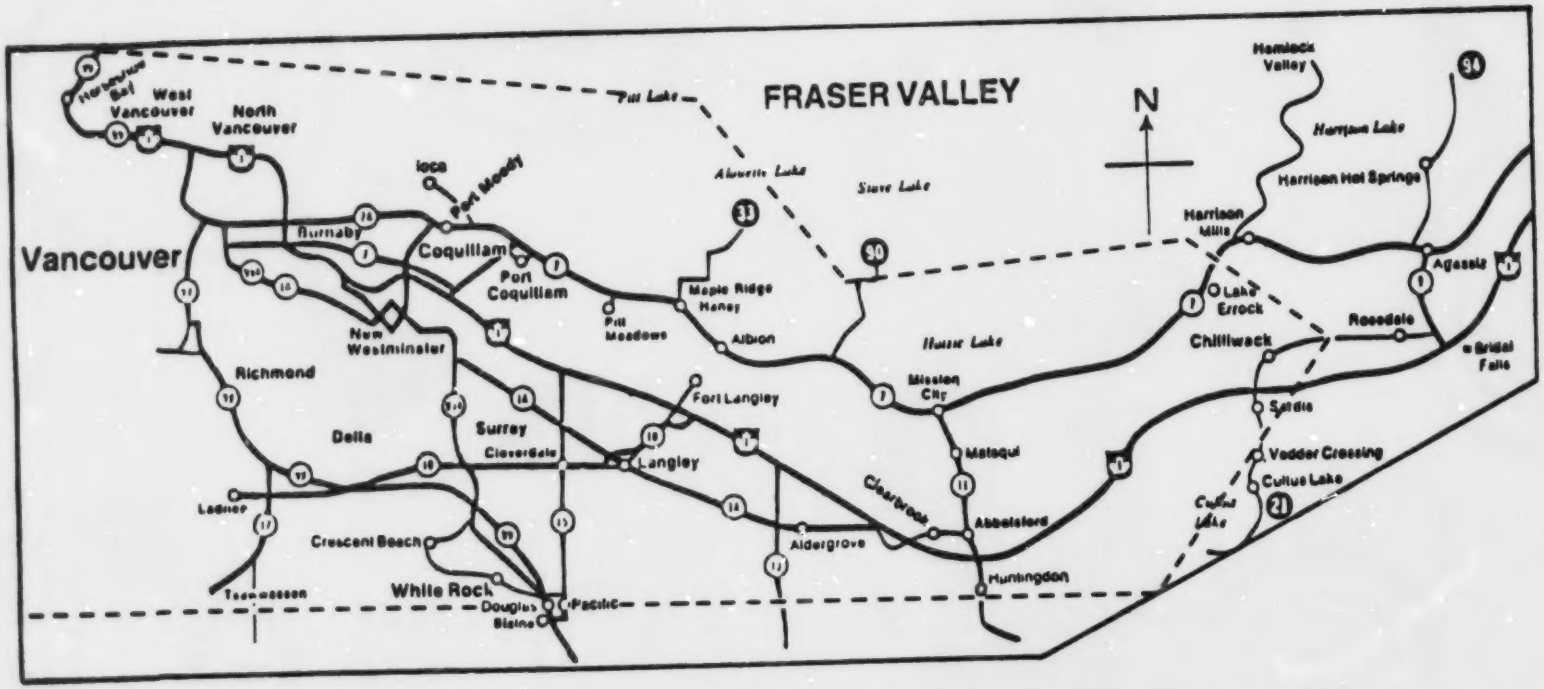
* John Jessup, et al, Downtown Lodging Houses and Tenant Profile: 3rd Annual Report, City of Vancouver Social Planning Department, October, 1983.

TOURIST ACCOMMODATION PRIMARY CATCHMENT AREA



Primary Catchment Area - - - - -

AVERAGE DAILY ACCOMMODATION AVAILABLE BY MONTH
EXPO 86 AND OTHER VISITORS

Month	Commercial Accommodation			Campgrounds/ Trailer Parks	Total
	Catchment Area	Outlying Areas	Total		
May	19,075	7,250	26,325	3,500	29,825
June	19,150	7,250	26,400	3,500	29,900
July	19,150	7,250	26,400	3,500	29,900
August	19,150	7,250	26,400	3,500	29,900
September	18,400	7,250	25,650	3,500	29,150
October*	18,400	7,250	22,650	3,500	29,150

* October 1-13 only.

Source: Projections by Clayton Research Associates.

The campground and trailer totals include all private facilities within the primary catchment area, plus 800 provincial campground sites at Golden Ears, Cultus, Mount Seymour and Porteau Parks. At this stage, it is assumed that out-of-town visitors would not use more distant provincial campgrounds such as Alice Lake, Rolley Lake or Sasquatch. Also, no provision has been made for any further temporary or permanent facilities at such locations as Mount Seymour, Cypress Park or Golden Ears.

Deficiencies in Accommodation Supply Identified

For commercial accommodation, supply is expected to be tight but manageable throughout the fair. Even in the relatively low attendance periods of May and September-October, average daily supply in the catchment area does not match the average daily demand for commercial accommodation - the average daily deficit in these months ranges from 200 to 2,500 rooms. However, by utilizing rooms in the outlying areas, average daily demand during these months should generally be met.

However, during the peak month of August, there are expected to be small on-going deficiencies, even in the outlying areas. Within the catchment area itself, the average daily deficit for commercial accommodation in July and August is estimated at 4,500-6,700 rooms.*

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* Since deficits are determined on a daily basis, average daily accommodation deficits can not be derived by subtracting the average daily supply from average daily requirements.

AVERAGE DAILY ACCOMMODATION DEFICIT BY MONTH*
EXPO 86 AND OTHER VISITORS

	Commercial Accommodation				
	Catchment Area		Total		
	Number of Deficit Days	Average Deficit (Rooms)	Number of Deficit Days	Average Deficit (Rooms)	Campgrounds Trailer Parks
May	12	750	0	0	0
June	17	1,950	0	0	0
July	31	4,500	0	0	0
August	31	6,700	11	1,150	0
September	11	200	0	0	0
October**	13	2,500	0	0	0

* For those days on which a deficit exists.
** October 1-13 only.

Source: Estimates by Clayton Research Associates.

Shortages of accommodation are not expected in campgrounds and trailer parks. Available supply should, on average, meet demand, without forcing visitors to seek sites further away from Vancouver.

It should be noted that these results are quite sensitive to the specific assumptions employed in the analysis, particularly the number of out-of-town visits/visitors to the Expo 86 site and the allocation of accommodation demand across hotel/motel, trailer/campground and non-commercial categories. Updated market research by Expo 86, for example, now suggests that fewer visitors than originally anticipated will use campgrounds or trailer parks, and a higher proportion will seek hotel/motel accommodation. This implies a greater reliance on package and similar tours to the Vancouver area during the fair.

Although no serious problems are indicated in total, shortages of accommodation through an inability to match supply with demand could have serious implications for the success of Expo 86. Accommodation problems during the first weeks of the fair could well affect later attendance if these difficulties are well-publicized in key markets. Some visitors may well change their plans to attend Expo 86, whereas if, as seems likely from this analysis, these deficiencies only begin to be highlighted in the peak summer months, the majority of visitors will probably have already committed themselves to visit Vancouver.

Other Sources of Supply Could Reduce Deficits in Accommodation

It is unlikely that much of the excess demand for commercial accommodation within the catchment area could be accommodated in existing conventional rental units. Conversion of existing rental units to apartment/hotel accommodation for the period of the fair is unlikely to be widespread because of the costs involved in conversion (painting, furnishing, etc.) and the relatively limited

peak visitor period (June, July and August). In addition, landlords would generate no income during the conversion period and the units would need to be refurbished and re-rented after the fair.

For those wishing commercial accommodation, but unable to find it within a reasonable distance of the Expo 86 site, there are several alternatives open:

- Switch to campgrounds or trailer parks - the unutilized supply, however, will be quite limited, probably no more than 1,000 sites per day during July and August. In addition, visitors are not likely to have their own equipment to take advantage of any vacant sites.

- Switch to staying with friends or relatives - while this is a possibility, the estimates already assume that over one-quarter of all visitors will rely upon this source of accommodation. During the peak months, nearly 22,500 visitors per day are already projected to be housed in such a manner.

- Rely upon non-listed hotel accommodation - the supply estimates exclude approximately 1,700 hotel rooms with innkeeper's licences within the City of Vancouver, plus up to an additional 2,700 rooms scattered throughout the Lower Mainland. These units are primarily of a residential character and generally are of very low quality. Since these units by and large are not located in areas which would normally cater to tourists, it is reasonable to assume that upgrading costs would have to be covered by additional revenues received during Expo 86. While these costs have not been examined in this study, it is not clear that sufficient incentive exists for any permanent upgrading.*

- Reduced length of stay - current calculations allow for Expo 86 visitors using commercial accommodation to stay an average of 2.6 days in Vancouver. If the average stay were reduced, for example, to 2.2 days during July and August, requirements for commercial accommodation would fall by a total of 230,000 units during these months, a decline of nearly 15 percent. Such an option would be particularly attractive to visitors if hotel and motel room rates climb sharply, or visitors are required to stay in sub-standard accommodation. It should be noted that the calculations already provide for an increase in average party size during the summer months.

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* The City of Vancouver has already expressed its concern over potential permanent or temporary displacement of low and moderate income residents from such quarters: City of Vancouver, Expo 86: A City Perspective of Impact and Issues, (undated).

- Switch to private home accommodation - the current projections assume about 2,000 rooms from this source, including bed and breakfast and UBC off-campus accommodation. It should be noted that, in contrast, 83,000 private homes in Montreal were registered for accommodation during Expo 67.* This can be a very 'elastic' source of low-priced accommodation, meeting swings in demand as they occur. On the other hand, there can be difficulties in ensuring that reasonable standards are maintained and that visitors are able to locate and rent rooms.

About 750 New Rental Units Could House Expo Visitors

One of the major problems in assessing the scope for dedicating new rental accommodation to housing Expo 86 visitors is that previous Expo 86 studies do not provide any information on accommodation demand across price ranges. It is therefore difficult to determine whether shortages exist at the prices which such units would command in the market. For example, simply to cover all costs of new construction, including a return to the investor equivalent to the interest rate, necessitates charging a minimum of $28-$30 per night (1983 dollars) for a one-bedroom unit.** Once furniture costs, repairs, commissions, advertising, security and an allowance for vacancies are included, it is reasonable to assume that this cost might well double, to at least $55-$60 per night. Some, but not all, visitors would be prepared to pay such rates for an extended stay.

While very much a preliminary estimate at this stage, the supply/demand patterns outlined in this report suggest that, for evaluation purposes, a range of 500 to 1,000 new conventional rental units might be dedicated to the visitor market. The working assumption employed here is that 750 new rental units could be built to accommodate visitor demand. Reasonably good levels of occupancy could be expected in these units throughout the life of the fair. The balance of excess demand would then be met from the other sources described above.

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* Universal and International Exhibition of 1967, Expo 67 General Report, Volume 4, Montreal, 1969.

** Based on development costs of approximately $65,000 per unit, an interest cost of 13 per cent and operating costs of $1,800 per year. It is assumed that these units would be built in the inner part of the CMA. This cost refers to a full years operation.

TOTAL DEMAND FOR TEMPORARY RENTAL ACCOMMODATION FROM EXPO 86

Summarizing the results of the previous sections:

- The construction phase of Expo 86 is unlikely to result in any significant increase in the demand for rental accommodation in Vancouver;
- Expo 86 is planning to lease approximately 1,000 apartment units to serve the needs of out-of-town pavilion staff and entertainers at the fair (exclusive of accommodation leased from UBC); these will presumably be new units since Expo has made a commitment that no existing tenants will be displaced;
- Employment created by the operational phase of Expo 86 will be substantial but is unlikely to create a large additional demand for rental accommodation; an allowance of roughly 250 rental units should be adequate to meet demand from this source; and
- Accommodation for visitors to Expo 86 is expected to be tight within the catchment area during the peak months of June-August, 1986 and some of the excess demand could likely be accommodated through the provision of temporary furnished apartments; a total of 750 new rental units would seem reasonable for this market (the mid-point of a 500 to 1,000 unit range).

Combining the excess demand from all Expo 86 sources, it would appear that a maximum of about 2,000 additional rental units might be required to provide for the extra accommodation needs of temporary employees and visitors to the fair.

AN ANALYSIS OF THE ADJUSTMENTS TO THE VANCOUVER CMA RENTAL MARKET AS A RESULT OF EXPO 86

This chapter examines the probable effect on the Vancouver CMA rental market of the assumption that accommodation for the estimated 2,000 unit demand for temporary rental accommodation generated by Expo 86 is built and is put onto the private rental market at the end of the fair in mid October, 1986.

RENTAL MARKET IMPACTS

Low Vacancy Rate During Expo 86

With no impact from Expo 86, it was concluded in an earlier chapter that the Vancouver CMA rental market would have a low vacancy rate during 1986 because the gap between average market and economic rents would not yet have been sufficiently narrowed to entice rental entrepreneurs to undertake a significant amount of new rental construction. A total of only 700 vacant rental units were projected to be available at June 1, 1986 - the vacancy rate was projected to be only 0.3 percent.

With the projected 2,000 unit demand for temporary rental accommodation from Expo 86, a stronger rental market can be expected which should stimulate the construction of additional new units to satisfy the temporary demand.

No Surplus of Rental Housing in 1987 if 2,000 Expo 86 Units are Built

While there is little doubt that the Vancouver CMA rental market will be tight during the time of Expo 86, the addition of a substantial number of vacant units to the market at the close of the fair can be expected to lead to some softening in the market since demand is expected to be constrained at that time due to rising real rents. The timing and extent of the rental market impact of these units is primarily dependent on the number that come available.

- Expo 86 has indicated that they will be leasing up to 1,000 units for entertainers and out-of-town pavilion staff. These are likely to be new units which will be coming onto the market in November and December of 1986.

- The 250 units estimated to be required for new workers both on-site and off-site as a result of Expo 86 may not all come

onto the market immediately at the conclusion of the fair as, in some cases, the jobs may continue for some time after the end of the fair while, in others, the occupants may stay on in Vancouver and seek alternative employment. It seems likely that some of these units will come available for general rental market occupancy in the latter months of 1986 but most will be vacated during the first half of 1987.

- The estimated 750 units required as temporary accommodation for visitors to Expo 86 might start experiencing vacancies in September and October, 1986 as the pressure on conventional commercial hotel-type accommodation wanes due to declining attendance. Nonetheless, good occupancy levels seem likely throughout the period of the fair so none of these units should enter the rental market until after the fair. Also, some work will be required on these units (i.e., removal of furnishings) before they are rented out. Therefore, it seems likely that these units will start entering the conventional rental market in late October, 1986.

In sum, it would appear that virtually all of the rental units will be on the private rental market by mid 1987. It is assumed that all units will be rental, not put up for sale as condominiums after the fair closes. It is also assumed that all of the Expo 86 demand for rental accommodation will be felt by June 1, 1986 and that all of the additional units will be ready for occupancy by June 1, 1986.

RELATIONSHIP BETWEEN RENTAL HOUSING DEMAND AND SUPPLY
VANCOUVER CMA, 1983-1991

	Rental Stock* June 1	Rental Completions in 12 Months Ending May	Rental Vacancies June 1	Rental Demand in 12 Months Ending May	Rental Vacancy Rate** June 1
	Units				Percent
1983	212,460	7,424	5,360	4,311	2.5
1984	217,100	4,640	4,900	5,100	2.3
1985	220,900	3,800	3,200	5,500	1.4
1986	225,700	4,800	700	7,300	0.3
1987	227,700	2,000	1,700	1,000	0.7
1988	230,200	2,500	1,200	3,000	0.5
1989	233,200	3,000	900	3,300	0.4
1990	237,700	4,500	1,900	3,500	0.8
1991	243,700	6,000	4,250	3,650	1.7

* The stock has not been adjusted to account for net losses.

** The vacancy rate refers to the entire stock of rental accommodation which is more inclusive than the coverage of CMHC's rental apartment vacancy survey.

Source: Projections by Clayton Research Associates.

As a result of the temporary demand for rental accommodation from Expo 86, total rental demand in the Vancouver CMA, the net increase in occupied rental dwellings, will be different from the projections presented earlier (page 42). Rental demand in the twelve months

ending May, 1986 totals 7,300 units while in the following twelve months, total rental demand is projected at only 1,000 units as a result of the loss of temporary Expo 86 demand. For the two years taken together, rental demand totals 8,300 units, the same as in the rental demand projections presented on page 42.

Even allowing for the increased vacancies as a result of the 2,000 Expo 86 units coming onto the rental market, vacancies in June, 1987 still represent an overall rate of only 0.7 percent. While this is higher than the 0.2 percent vacancy rate which was projected in the absence of any impact from Expo 86, it is still a low vacancy rate.

In the event that fewer than 2,000 rental units are built for Expo 86, it seems likely that the vacancy situation will be somewhere between that indicated here and that of the no-Expo 86 assumption. In this case, more units are likely to be built in the post-Expo 86 period since vacancy rates will be lower than those projected in the previous table.

Opportunities for Private Sector to Accommodate Expo 86 Demand

It is unclear at this time whether or not the private sector will respond to the Expo 86 demand identified here (i.e., 2,000 additional rental units). Based on the analysis of the rental market outlook without Expo 86 presented in a previous chapter, there will be financially viable opportunities for the private sector to build market accommodation coming on stream in the late 1980s. Because of Expo 86, opportunities appear to exist for developers to move their schedules ahead and put completed units on the market by mid 1986.

ANALYSIS OF RENTAL HOUSING SUB-MARKETS

Rental demand within the Vancouver CMA housing sub-markets will be strongly influenced by the age composition, household characteristics and incomes of renters over the period to 1991. This chapter provides a brief overview of the Vancouver CMA rental market by sub-market for new rental housing.

RENTAL HOUSING MARKET WITHOUT EXPO 86

This section examines the rental market by sub-market area without considering the impacts of Expo 86.

Renter Household Characteristics Vary by Sub-Market

DISTRIBUTION OF RENTER HOUSEHOLDS BY TYPE AND SUB-MARKET AREA VANCOUVER CMA, 1981, PERCENT

	Non-Family	Husband-Wife Families		Lone-Parent and Other	Total
		Without Children	With Children		
City of Vancouver					
West End	18	10	3	4	13
Other	38	32	30	34	35
Sub-Total	56	42	33	38	48
Burnaby/New Westminster	17	21	15	16	18
North Shore*	9	11	9	10	10
Other CMA	18	26	43	36	24
Total	100	100	100	100	100

* Includes West Vancouver and North Vancouver (City and District Municipality).

Source: 1981 Census of Canada.

An analysis of 1981 Census data for the Vancouver CMA clearly indicates that household characteristics have a major bearing on rental demand within various housing sub-markets. Families with children have a lower propensity to live within the boundaries of the City of Vancouver, particularly the West End. This is also true for lone-parent and other households, which are comprised mainly of single parents.

Conversely, couples without children and, especially, non-family households are more heavily concentrated in the City of Vancouver itself, with 18 percent of all CMA non-family renter households living in the West End alone. To some degree, this distribution of demand reflects a preference among these groups for inner-city locations, although the existence of older, lower-cost rental stock in the core (much of it formerly under rent control) obviously has influenced the choice of location as well.

DISTRIBUTION OF RENTER HOUSEHOLDS BY TYPE AND SUB-MARKET AREA
CITY OF VANCOUVER, 1981, PERCENT

	Non-Family	Husband-Wife Families: Without Children	Husband-Wife Families: With Children	Lone-Parent and Other	Total
West End	31	24	9	13	27
Kitsilano	13	11	5	6	10
False Creek/Fairview Slopes	2	2	3	3	3
South Granville/Oak	10	8	3	4	8
Other	44	55	80	74	52
Total	100	100	100	100	100

Source: 1981 Census of Canada.

Major differences in renter characteristics are also evident within the rental sub-markets of the City of Vancouver (see map on following page). Renter couples with children and, to a lesser extent, lone-parent and other households are more likely to be found either in the east end or Marpole apartment areas, or in other non-apartment dwellings scattered throughout the City. In contrast, a much higher proportion of couples without children and non-family households are located in the traditional apartment/townhouse rental areas such as the West End, Kitsilano and South Granville/Oak.

In evaluating the Vancouver CMA rental housing sub-markets, the incomes of renter households also need to be taken into consideration. Half of all lower income tenants (tenants with household incomes of less than $20,000 in 1980) are to be found within the City of Vancouver. While many of these are elderly non-family households, there are a significant number of all other household types which also reported limited income levels.

DISTRIBUTION OF RENTER HOUSEHOLDS BY HOUSEHOLD INCOME AND SUB-MARKET AREA*
VANCOUVER CMA, 1981, PERCENT

	Less Than $10,000	$10,000 -$19,999	$20,000 -$29,999	$30,000 -$39,999	$40,000 And Over	Total
City of Vancouver						
West End	13	13	10	10	14	12
Other	40	35	33	30	29	36
Sub-Total	53	48	43	40	43	48
Burnaby/New Westminster	17	16	19	20	14	18
North Shore**	7	10	10	10	14	10
Other	23	26	28	30	29	24
Total	100	100	100	100	100	100

* Incomes refer to the year 1980.
** Includes West Vancouver and North Vancouver (City and District Municipality).

Source: 1981 Census of Canada.

Differing Rates of Growth by Sub-Market

An examination of Census of Canada and CMHC data on rental accommodation added to the stock since 1976 indicates that growth has occurred largely in the outer suburban areas such as Surrey

SUB-MARKET AREAS, CITY OF VANCOUVER

and Richmond. The City of Vancouver, in contrast, has lagged, with only False Creek/Fairview Slopes reporting a large increase in the rental stock, albeit from a small base. Growth in the 'other' area of the City of Vancouver has been concentrated in the east end and in Champlain Heights. In the West End and Kitsilano, some of the increase in the rental stock arising from new construction has been offset by demolitions.

CHANGES IN RENTAL HOUSING STOCK BY SUB-MARKET
VANCOUVER CMA, 1976-1983, UNITS

	Total Occupied Rental Stock June 1, 1976*	Change in Occupied Rental Stock June 1, 1976-June 1, 1981	New Rental Construction June 1, 1981-Dec. 31, 1983**
City of Vancouver			
West End	23,845	1,265	833
Kitsilano	10,390	330	438
False Creek/ Fairview Slopes	790	920	530
South Granville/ Oak	7,715	260	122
Other	42,945	6,885	1,678
Sub-Total	85,685	9,660	3,601
Burnaby/New Westminster	29,325	5,805	2,591
North Shore***	15,470	3,755	400
Other CMA	33,030	15,005	8,624
Total	163,510	34,225	15,216

* Includes all rental units regardless of unit type.
** Includes rental row and apartment completions.
*** Includes West Vancouver and North Vancouver (City and District Municipality).

Source: CMHC, the Census of Canada and estimates by Clayton Research Associates.

This shift in rental accommodation towards the suburban areas reflects in large measure the lack of available multiple zoned land for housing in the inner core areas such as the West End.

Even without Expo 86, vacancy rates within the Vancouver CMA are projected to become very low by 1986, with rents moving towards the economic levels necessary to stimulate private construction. Vacancy rates in all sub-markets are projected to be low.

Shift in Location of Private Unassisted Rental Production

As new private unassisted rental supply comes onto the market, a lower proportion of this supply can be expected to be in inner city areas. The rationale for this view is as follows:

- Under present zoning regulations, much of the available capacity in 'traditional' rental areas such as the West

End, Kitsilano and Marpole has already been committed.*

- Whatever sites are available in these areas, and at B.C. Place, will likely be developed largely for owner-occupancy in the absence of specific rental assistance programmes.

- Within the City of Vancouver itself, there may be some prospect for redevelopment and construction of new rental stock on the east side, for example, along the ALRT line in the vicinity of the Broadway and other stations. In general, the units constructed will likely be smaller than is currently the average in the area, catering in part to tenants seeking lower-priced accommodation outside of, but still near, the inner-city. This could include some component of lower-income downtown workers unable to pay higher rent levels in the core.

  The extent of development here, however, will be determined not only by economic, but by other forces as well. Neighbourhood planning processes now underway will have a significant impact on development within the vicinity of the Broadway, Nanaimo, 29th Avenue and Joyce stations.

Outside the City of Vancouver, some apartment development will also be tied to the ALRT line. An example is the Central Park/ Metrotown area of Burnaby where sites are still available.

RENTAL HOUSING MARKET WITH EXPO 86

This section takes into consideration the impact of Expo 86 on the demand for new rental housing by sub-market area.

Impact of Expo 86 Mainly in Inner-City Area

This study has identified that Expo 86 will generate an additional rental housing demand for approximately 2,000 units, of which

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* Studies conducted by the City of Vancouver have concluded that, under present zoning, the potential for new housing in the City outside the downtown and the neighbourhoods within the core could be used up in about 10 years. The Coreplan proposals include rezoning selected existing single-family areas for medium-density, ground-oriented housing (see City of Vancouver Planning Department, Quarterly Review, July, 1983, pages 6 and 11).

about two-thirds will be for on-site employees and entertainers with the remainder for 'overflow' visitor accommodation. A significant proportion of this demand would be for accommodation either in the inner-city area or in areas with good transportation access to the Expo 86 site. The West End, Kitsilano and Fairview Slopes are particular sub-markets where demand will be heavy.

Not all of those demanding additional units, however, will be able to afford the rent levels in these areas (i.e., on-site and off-site workers whose jobs begin and terminate with the fair). Again, more affordable housing may be available in areas adjacent to the ALRT line, or at least with good bus route access to down-town. Since much shift work may be involved, workers would obviously be concerned about regularity of bus service, shunning those suburban areas where service is geared to meeting the mor-ning and afternoon peaks during the work week. Less pressure on rental markets, therefore, can be expected in areas such as Surrey-Delta-White Rock and Richmond.

Within the immediate vicinity of Expo 86, there are a number of sites with available land which could be developed for rental housing during the fair, of which the most notable are the Imperial and Pennyfarthing properties on the south shore of False Creek. There are also a number of other sites that have received development permits, but have not yet started construction, as current rent levels do not support their development.

TECHNICAL APPENDIX

BACKGROUND TABLES ON THE ANALYSIS OF HOUSEHOLD GROWTH HOUSING DEMAND AND RENTAL MARKET CONDITIONS IN THE VANCOUVER CMA

DESCRIPTION OF APPENDIX TABLES

This appendix provides background statistics which were used as a basis for the conclusions reached in this report.

Table 1 provides historical Census of Canada data and projections of population by age group for the Vancouver CMA. The population projections were adapted by Clayton Research Associates from projections prepared by the Greater Vancouver Regional District (GVRD) Development Services Department for the GVRD, an area which is slightly smaller than the Vancouver CMA. In April, 1984, subsequent to the preparation of these population and follow-up household and housing demand projections by Clayton Research, the GVRD Development Services Department released Vancouver CMA population projections which were very similar to the Clayton Research projections (1991 populaton of 1,430,851 compared to the Clayton Research projection of 1,428,000). Because of the similarity of the two population projections and due to time and budget constraints, the population projection prepared by Clayton Research was used for this report.

Table 2 provides household headship rates for the Vancouver CMA for the 1971-1991 period. Household headship rates are calculated by dividing the number of households in a given age group by the population for that age group. The combination of the projected household headship rates in this Table and the projection of population by age group in Table 1 results in the distribution of households by age group in Table 3.

Table 3 presents historical Census of Canada data and projections of households by age of head for the Vancouver CMA - the result of the combination of data in Tables 1 and 2.

Table 4 provides a summary of various vacancy indicators for the Vancouver CMA which were used in analysing the distribution of dwelling completions among household growth, net replacement demand and change in the vacant stock during the 1971-1981 period and also in assessing the changes in the size of the vacant stock since the 1981 Census of Canada. Data on the total dwelling stock are from the Census of Canada and are subject to some residual enumeration error. Vacancy data for rental apartments of 6 or more units are provided by CMHC's bi-annual Apartment Vacancy Survey. Newly-completed but unoccupied data for new ownership units are from CMHC as well. MLS listings are from the Canadian Real Estate Association.

Tables 5 and 6 provide the percentage distributions and actual numbers of households in the Vancouver CMA broken down by age of head and household type. The 1976 and 1981 figures are from the Census of Canada while the 1986 and 1991 figures are projections by Clayton Research Associates. These data provide the basis for the projection of renter household growth in 1981-1991 provided in Tables 8 and 9.

Table 7 presents data on the affordability of ownership housing in the Vancouver CMA over the 1971-1983 period. Using Multiple Listing Service (MLS) average house prices for the Vancouver and Fraser Valley Real Estate Boards, a 20 percent downpayment, a 25-year amortization period and a 5-year conventional mortgage rate, the annual mortgage costs associated with owning an MLS house in each of the years is determined. Average family income data is determined from Statistics Canada's Income Distribution by Size in Canada and average weekly earnings data are from Statistics Canada's Employment, Payrolls and Hours Survey.

Tables 8 and 9 provide data on the percentage distributions and actual number of households in the various age and household type groups which rent their dwelling. The 1976 and 1981 data are from the Census of Canada while the projections for 1986 and 1991 were prepared by Clayton Research Associates. Table 9 provides the base data for the projections of renter household growth in the Vancouver CMA.

Table 10 provides a summary of the projected growth of renter households by age of head and household type in the Vancouver CMA over the 1981-1991 period based on the data presented in Table 9.

Table 11 provides a summary of rental market indicators in the Vancouver CMA over the 1962-1983 period. Vacancy rates and rental apartment completions are from CMHC's bi-annual Apartment Vacancy Survey. Average real and money rents are estimates prepared by Clayton Research Associates based on the Statistics Canada consumer price index and rent data from the Census of Canada, the Family Expenditure Survey and the rent component of the consumer price index.

APPENDIX TABLE 1

TOTAL POPULATION BY AGE GROUP VANCOUVER CMA, 1971-1991*

Age Group	Actual			Projected	
	1971	1976	1981	1986	1991
	Persons				
0-4	79,245	72,545	77,495	86,887	87,251
5-9	94,575	82,600	76,975	78,683	88,536
10-14	101,075	96,760	87,050	78,548	81,396
15-19	93,920	106,550	103,580	88,636	81,539
20-24	96,225	107,050	119,785	110,290	94,819
25-29	83,785	108,020	117,345	129,120	119,238
30-34	67,665	86,720	115,165	122,933	136,945
35-39	64,640	70,710	90,575	117,284	126,664
40-44	66,005	66,745	74,535	91,326	119,381
45-49	67,440	66,805	68,340	74,648	92,677
50-54	59,625	67,225	68,210	68,192	75,541
55-59	55,445	58,045	66,240	66,309	67,830
60-64	43,970	53,335	56,935	63,888	65,260
65+	108,725	123,160	145,955	168,256	190,923
Total	1,082,340	1,166,270	1,268,185	1,345,000	1,428,000
	Percentage Distribution				
0-4	7.3	6.2	6.1	6.5	6.1
5-9	8.7	7.1	6.1	5.9	6.2
10-14	9.3	8.3	6.9	5.8	5.7
15-19	8.7	9.1	8.2	6.6	5.7
20-24	8.9	9.2	9.4	8.2	6.6
25-29	7.7	9.3	9.2	9.6	8.3
30-34	6.3	7.4	9.1	9.2	9.6
35-39	6.0	6.1	7.1	8.7	8.9
40-44	6.1	5.7	5.9	6.8	8.4
45-49	6.2	5.7	5.4	5.5	6.5
50-54	5.5	5.8	5.4	5.1	5.3
55-59	5.1	5.0	5.2	4.9	4.7
60-64	4.1	4.6	4.5	4.7	4.6
65+	10.1	10.5	11.5	12.5	13.4
Total	100.0	100.0	100.0	100.0	100.0

* As at June 1 of the indicated years.

Source: Census of Canada and projections by Clayton Research Associates.

APPENDIX TABLE 2

HOUSEHOLD HEADSHIP RATES*
VANCOUVER CMA, 1971-1991**

Age Group	Actual			Projected	
	1971	1976	1981	1986	1991
15-19	.022	.031	.031	.028	.025
20-24	.241	.273	.282	.276	.270
25-29	.437	.455	.472	.466	.460
30-34	.485	.514	.529	.529	.531
35-39	.515	.526	.553	.553	.555
40-44	.523	.546	.557	.557	.560
45-49	.514	.545	.567	.567	.570
50-54	.521	.538	.564	.564	.568
55-59	.548	.548	.557	.557	.561
60-64	.560	.572	.566	.566	.568
65+	.575	.591	.586	.586	.588

* Number of households in a given age group as a ratio of the total population within that age group.

** As at June 1 of the indicated years.

Source: Census of Canada and projections by Clayton Research Associates.

APPENDIX TABLE 3

TOTAL HOUSEHOLDS BY AGE OF HEAD VANCOUVER CMA, 1971-1991*

Age Group	Actual			Projected	
	1971	1976	1981	1986	1991
	Households				
15-19	2,075	3,355	3,245	2,482	2,037
20-24	23,185	29,185	33,760	30,440	25,600
25-29	36,620	49,145	55,385	60,170	54,849
30-34	32,810	44,555	60,900	65,033	72,718
35-39	33,325	37,190	50,090	64,858	70,298
40-44	34,505	36,440	41,490	50,868	66,853
45-49	34,660	36,395	38,775	42,326	52,826
50-54	31,095	36,160	38,445	38,459	42,907
55-59	30,390	31,820	36,885	36,934	38,053
60-64	24,660	30,490	32,220	36,160	37,068
65+	62,490	72,780	85,585	98,600	112,263
Total	345,815	407,515	476,780	526,330	575,472
	Percentage Distribution				
15-19	0.6	0.8	0.7	0.5	0.4
20-24	6.7	7.2	7.1	5.8	4.5
25-29	10.6	12.1	11.6	11.4	9.5
30-34	9.5	10.9	12.8	12.4	12.6
35-39	9.6	9.1	10.5	12.3	12.2
40-44	10.0	8.9	8.7	9.7	11.6
45-49	10.0	8.9	8.1	8.0	9.2
50-54	9.0	8.9	8.1	7.3	7.5
55-59	8.8	7.8	7.7	7.0	6.6
60-64	7.1	7.5	6.8	6.9	6.4
65+	18.1	17.9	17.9	18.7	19.5
Total	100.0	100.0	100.0	100.0	100.0

* As at June 1 of the indicated years.

Source: Census of Canada and projections by Clayton Research Associates.

APPENDIX TABLE 4

VACANCY INDICATORS
VANCOUVER CMA, 1971-1984

Source, Date and Survey Coverage	1971	1976	1981	1984
Census of Canada (June 1) Total Dwelling Stock				
Occupied Units	345,720	407,555	476,755	n/a
Vacant Units	15,060	18,880	13,410	n/a
Total Units	360,780	426,435	490,165	n/a
Vacancy Rate (%)	4.2	4.4	2.7	n/a
CMHC (April) Rental Apartments in Private Buildings of 6+ Units				
Vacant Units	n/a	1,204	190	2,925
Total Universe	n/a	89,450	101,661	110,952
Vacancy Rate	4.1*	1.3	0.2	2.6
CMHC (May 31) Newly Completed but Unoccupied Ownership Units				
Single and Semi	269	1,411**	790	808***
Row and Apartment	n/a	1,321**	108	807***
Total	n/a	2,732**	898	1,615
CREA (May 31) Properties Listed With MLS				
Residential Properties	n/a	n/a	10,871	13,423***

* CMHC apartment vacancy survey data for 1971 applies to June and excludes buildings completed less than six months.
** These figures refer to January, 1977.
***These figures refer to March, 1984.

Source: Census of Canada, CMHC and Canadian Real Estate Association.

APPENDIX TABLE 5

PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY TYPE AND AGE OF HEAD
VANCOUVER CMA, 1976-1991

Age Group	Non-Family				Husband and Wife without Children				Husband and Wife With Children			
	Actual		Projected		Actual		Projected		Actual		Projected	
	1976	1981	1986	1991	1976	1981	1986	1991	1976	1981	1986	1991
15-19	75.7	70.4	68.1	65.8	14.3	18.7	20.3	21.8	4.6	4.5	4.9	5.3
20-24	53.1	56.8	56.2	55.6	29.9	27.9	28.3	28.8	12.4	9.7	9.6	9.5
25-29	33.3	40.2	39.7	39.2	28.2	27.9	28.1	28.2	31.5	24.5	24.7	24.9
30-34	20.8	28.0	28.1	28.3	16.2	17.7	17.6	17.3	54.0	43.9	43.9	43.9
35-39	14.3	19.7	19.8	19.9	8.7	10.9	11.1	11.0	65.9	57.3	56.8	56.7
40-44	12.1	16.0	16.1	16.1	7.8	8.8	9.0	9.0	68.3	61.4	60.7	60.6
45-49	14.4	15.8	15.9	16.0	11.8	12.3	12.5	12.4	62.4	59.0	58.4	58.3
50-54	18.7	19.6	19.8	20.0	22.3	21.4	21.5	21.4	48.7	47.4	46.8	46.6
55-59	23.6	25.6	25.8	25.8	33.9	34.2	34.4	34.4	33.8	30.7	30.2	30.1
60-64	31.3	32.6	32.6	32.5	43.0	42.7	43.0	43.2	19.2	18.0	17.7	17.6
65+	48.9	50.9	51.1	51.1	39.6	40.3	40.6	40.7	6.0	5.1	4.9	4.8

Age Group	Lone-Parent and Other				Total			
	Actual		Projected		Actual		Projected	
	1976	1981	1986	1991	1976	1981	1986	1991
15-19	5.4	6.4	6.7	7.1	100.0	100.0	100.0	100.0
20-24	4.6	5.6	5.9	6.1	100.0	100.0	100.0	100.0
25-29	7.0	7.4	7.5	7.7	100.0	100.0	100.0	100.0
30-34	9.0	10.4	10.4	10.5	100.0	100.0	100.0	100.0
35-39	11.1	12.1	12.3	12.4	100.0	100.0	100.0	100.0
40-44	11.8	13.8	14.2	14.3	100.0	100.0	100.0	100.0
45-49	10.3	12.9	13.2	13.3	100.0	100.0	100.0	100.0
50-54	10.3	11.6	11.9	12.0	100.0	100.0	100.0	100.0
55-59	8.7	9.5	9.6	9.7	100.0	100.0	100.0	100.0
60-64	6.5	6.7	6.7	6.7	100.0	100.0	100.0	100.0
65+	5.5	3.7	3.4	3.4	100.0	100.0	100.0	100.0

Source: Census of Canada and projections by Clayton Research Associates.

APPENDIX TABLE 6

TOTAL HOUSEHOLDS BY TYPE AND AGE OF HEAD
VANCOUVER CMA, 1976-1991

Age Group	Non-Family				Husband and Wife without Children				Husband and Wife With Children			
	Actual		Projected		Actual		Projected		Actual		Projected	
	1976	1981	1986	1991	1976	1981	1986	1991	1976	1981	1986	1991
15-19	2,540	2,275	1,690	1,341	480	615	504	444	155	145	122	108
20-24	15,485	19,160	17,107	14,234	8,745	9,435	8,615	7,373	3,610	3,265	2,922	2,432
25-29	16,360	22,275	23,887	21,501	13,880	15,455	16,908	15,467	15,465	13,565	14,862	13,657
30-34	9,265	17,035	18,274	20,579	7,200	10,780	11,446	12,580	24,075	26,750	28,549	31,923
35-39	5,295	9,835	12,842	13,989	3,240	5,450	7,199	7,733	24,525	28,705	36,839	39,859
40-44	4,415	6,635	8,190	10,763	2,850	3,665	4,578	6,017	24,885	25,475	30,877	40,513
45-49	5,235	6,135	6,730	8,452	4,325	4,755	5,291	6,550	22,705	22,880	24,718	30,798
50-54	6,760	7,555	7,615	8,581	8,060	8,210	8,269	9,182	17,605	18,195	17,999	19,995
55-59	7,490	9,425	9,529	9,818	10,805	12,630	12,705	13,090	10,745	11,325	11,154	11,454
60-64	9,525	10,485	11,788	12,047	13,090	13,765	15,549	16,013	5,865	5,810	6,400	6,524
65+	35,645	43,570	50,385	57,366	28,800	34,460	40,032	45,691	4,340	4,380	4,831	5,389
Total	118,015	154,385	168,037	178,671	101,475	119,220	131,096	140,140	153,975	160,495	179,273	202,652

Age Group	Lone-Parent and Other				Total			
	Actual		Projected		Actual		Projected	
	1976	1981	1986	1991	1976	1981	1986	1991
15-19	180	210	166	144	3,355	3,245	2,482	2,037
20-24	1,345	1,900	1,796	1,561	29,185	33,760	30,440	25,600
25-29	3,440	4,090	4,513	4,224	49,145	55,385	60,170	54,849
30-34	4,015	6,335	6,764	7,636	44,555	60,900	65,033	72,718
35-39	4,130	6,100	7,978	8,717	37,190	50,090	64,858	70,298
40-44	4,290	5,715	7,223	9,560	36,440	41,490	50,868	66,853
45-49	4,130	5,005	5,587	7,026	36,395	38,775	42,326	52,826
50-54	3,735	4,485	4,576	5,149	36,160	38,445	38,459	42,907
55-59	2,780	3,505	3,546	3,691	31,820	36,885	36,934	38,053
60-64	2,010	2,160	2,423	2,484	30,490	32,220	36,160	37,068
65+	3,995	3,175	3,352	3,817	72,780	85,585	98,600	112,263
Total	34,050	42,680	47,924	54,009	407,515	476,780	526,330	575,472

Source: Census of Canada and projections by Clayton Research Associates.

APPENDIX TABLE 7

AFFORDABILITY CALCULATION FOR AN AVERAGE-PRICED HOUSE VANCOUVER CMA, 1971-1983*

	Average MLS House Price	Mortgage Amount	Mortgage Interest Rate	Payment Per $1,000	Annual Mortgage Payment	Average Family Income	Ratio of Annual Mortgage Payment to Average Family Income
	Dollars		Percent		Dollars		
1971	22,585	18,068	9.43	6.62	1,869	12,177	15.3
1972	27,007	21,606	9.21	8.45	2,191	13,596	16.1
1973	35,376	28,301	9.59	8.62	2,927	15,146	19.3
1974	48,701	38,961	11.25	9.80	4,582	16,803	27.3
1975	54,619	43,695	11.44	9.97	5,228	19,284	27.1
1976	58,683	46,946	11.78	10.14	5,712	20,832	27.4
1977	61,001	48,801	10.36	9.12	5,341	22,088	24.2
1978	62,539	50,031	10.59	9.29	5,577	24,291	23.0
1979	66,906	53,525	11.98	10.32	6,629	27,902	23.8
1980	94,182	75,346	14.32	11.92	10,777	31,269	34.5
1981	137,430	109,944	18.15	14.85	19,592	35,344	55.4
1982	102,439	81,951	16.00**	13.19	12,971	38,525	33.7
1983	105,794	84,635	13.30	11.21	11,385	40,900	27.8
1983 1 year mortgage	105,794	84,635	10.98	9.63	9,780	40,900	23.9

* Assumes 5 year conventional mortgage rates, 25 year amortization period and a 20% downpayment.
** 1982 effective rate assumed at 16% due to vendor takeback mortgages.

Source: Statistics Canada, Canadian Real Estate Association, Bank of Canada and estimates by Clayton Research Associates.

APPENDIX TABLE 8

INCIDENCE OF RENTERS AMONG HOUSEHOLDS BY TYPE AND AGE OF HEAD* VANCOUVER CMA, 1976-1991

Age Group	Non-Family				Husband and Wife without Children				Husband and Wife With Children			
	Actual		Projected		Actual		Projected		Actual		Projected	
	1976	1981	1986	1991	1976	1981	1986	1991	1976	1981	1986	1991
15-19	95.3	95.4	94.8	94.0	94.8	95.9	95.1	94.0	83.9	72.4	71.8	71.0
20-24	94.0	92.8	92.0	91.0	77.0	79.4	78.8	78.0	68.5	70.3	69.8	69.0
25-29	87.6	86.6	85.9	85.0	56.4	57.2	57.0	56.5	37.7	39.3	38.7	38.0
30-34	78.4	78.0	77.6	77.0	43.0	42.2	42.0	41.5	22.1	22.5	22.1	21.5
35-39	73.8	70.3	69.8	69.0	39.2	34.3	33.8	33.0	16.0	15.5	15.[illegible]	15.3
40-44	70.1	67.5	66.9	66.0	36.5	32.5	31.9	31.0	12.6	12.4	12.4	12.2
45-49	68.5	65.2	64.7	64.0	30.8	27.6	27.1	26.5	10.9	10.3	10.3	10.1
50-54	63.6	61.6	60.9	60.0	25.8	22.5	22.1	21.5	10.6	9.8	9.8	9.6
55-59	59.7	57.2	57.0	56.5	23.4	20.5	20.5	20.3	10.9	10.1	10.2	10.1
60-64	57.4	56.0	55.9	55.5	23.3	20.4	20.4	20.2	13.0	10.4	10.4	10.2
65+	61.1	58.7	58.2	57.5	29.5	26.5	26.1	25.5	13.0	12.3	12.3	12.1

Age Group	Lone-Parent and Other				Total			
	Actual		Projected		Actual		Projected	
	1976	1981	1986	1991	1976	1981	1986	1991
15-19	88.9	85.7	85.0	84.1	94.3	93.5	93.1	92.1
20-24	88.5	84.2	83.3	82.2	85.5	86.4	85.6	84.6
25-29	71.9	69.7	69.1	68.2	62.0	65.6	64.9	64.0
30-34	56.5	54.6	54.3	53.8	40.3	44.8	44.6	44.0
35-39	53.8	46.6	46.4	46.0	29.7	32.1	31.1	31.7
40-44	39.5	41.1	40.7	40.1	24.6	26.9	27.0	26.5
45-49	36.7	34.3	34.1	33.7	24.5	24.2	24.2	23.8
50-54	32.3	32.2	31.7	31.0	26.1	25.3	25.2	24.7
55-59	26.8	28.2	27.8	27.2	28.0	27.4	27.5	27.2
60-64	24.6	23.6	23.6	23.3	32.1	30.4	30.4	30.2
65+	23.5	19.8	19.7	19.3	43.7	41.9	41.6	41.0

* Percentage of households in each type/age cell which are renters.

Source: Census of Canada and projections by Clayton Research Associates.

APPENDIX TABLE 9

RENTER HOUSEHOLDS BY TYPE AND AGE OF HEAD
VANCOUVER CMA, 1976-1991

Age Group	Non-Family				Husband and Wife without Children				Husband and Wife With Children			
	Actual		Projected		Actual		Projected		Actual		Projected	
	1976	1981	1986	1991	1976	1981	1986	1991	1976	1981	1986	1991
15-19	2,420	2,165	1,602	1,261	455	585	479	417	130	105	88	77
20-24	14,565	17,790	15,738	12,953	6,735	7,495	6,789	5,751	2,475	2,295	2,040	1,678
25-29	14,335	19,285	20,519	18,276	7,830	8,845	9,638	8,739	5,635	5,335	5,752	5,190
30-34	7,265	13,290	14,181	15,846	3,095	4,545	4,807	5,221	5,325	6,005	6,309	6,863
35-39	3,910	6,910	8,964	9,652	1,270	1,870	2,433	2,552	3,925	4,440	5,710	6,098
40-44	3,095	4,480	5,479	7,103	1,040	1,190	1,460	1,865	3,135	3,155	3,829	4,943
45-49	3,585	4,000	4,354	5,409	1,330	1,315	1,434	1,736	2,475	2,360	2,546	3,111
50-54	4,300	4,650	4,638	5,149	2,080	1,850	1,827	1,974	1,860	1,775	1,764	1,920
55-59	4,475	5,390	5,432	5,547	2,525	2,590	2,605	2,657	1,175	1,140	1,138	1,157
60-64	5,465	5,865	6,589	6,686	3,055	2,810	3,172	3,235	760	605	666	666
65+	21,770	25,580	29,324	32,985	8,505	9,135	10,448	11,651	565	540	594	653
Total	85,185	109,405	116,820	120,867	37,920	42,230	45,092	45,798	27,660	27,755	30,436	32,356

Age Group	Lone-Parent and Other				Total			
	Actual		Projected		Actual		Projected	
	1976	1981	1986	1991	1976	1981	1986	1991
15-19	160	180	141	120	3,165	3,035	2,310	1,875
20-24	1,190	1,600	1,496	1,283	24,965	29,180	26,063	21,665
25-29	2,475	2,850	3,119	2,880	30,475	36,315	39,028	35,085
30-34	2,270	3,460	3,675	4,119	17,955	27,300	28,972	32,049
35-39	1,925	2,845	3,708	4,009	11,030	16,065	20,815	22,311
40-44	1,695	2,350	2,942	3,839	8,965	11,175	13,710	17,750
45-49	1,515	1,715	1,911	2,368	8,905	9,390	10,245	12,624
50-54	1,205	1,445	1,450	1,598	9,445	9,720	9,679	10,641
55-59	745	990	986	1,005	8,920	10,110	10,161	10,366
60-64	495	510	572	579	9,775	9,790	10,999	11,166
65+	940	630	660	736	31,780	35,885	41,026	46,025
Total	14,615	18,575	20,660	22,536	165,380	197,965	213,008	221,557

Source: Census of Canada and projections by Clayton Research Associates.

APPENDIX TABLE 10

TOTAL RENTER HOUSEHOLDS BY FAMILY TYPE AND AGE OF HOUSEHOLD HEAD VANCOUVER CMA, 1981-1991

	1981	1986	1991	Increase 1981-1986	Increase 1986-1991
Non-Family					
Less than 35	52,530	52,040	48,336	-490	-3,704
35-54	20,040	23,435	27,313	3,395	3,878
55-64	11,255	12,021	12,233	766	212
65 and over	25,580	29,324	32,985	3,744	3,661
Total	109,405	116,820	120,867	7,415	4,047
Husband and Wife Without Children					
Less than 35	21,470	21,713	20,128	243	-1,585
35-54	6,225	7,154	8,127	929	973
55-64	5,400	5,777	5,892	377	115
65 and over	9,135	10,448	11,651	1,313	1,203
Total	42,230	45,092	45,798	2,862	706
Husband and Wife With Children					
Less than 35	13,740	14,189	13,808	449	-381
35-54	11,730	13,849	16,072	2,119	2,223
55-64	1,745	1,804	1,823	59	19
65 and over	540	594	653	54	59
Total	27,755	30,436	32,356	2,681	1,920
Lone-Parent and Other					
Less than 35	8,090	8,431	8,402	341	-29
35-54	8,355	10,011	11,814	1,656	1,803
55-64	1,500	1,558	1,584	58	26
65 and over	630	660	736	30	76
Total	18,575	20,660	22,536	2,085	1,876
All Household Types					
Less than 35	95,830	96,373	90,674	543	-5,699
35-54	46,350	54,449	63,326	8,099	8,877
55-64	19,900	21,160	21,532	1,260	372
65 and over	35,885	41,026	46,025	5,141	4,999
Total	197,965	213,008	221,557	15,043	8,549

Source: 1981 Census of Canada and projections by Clayton Research Associates.

APPENDIX TABLE 11

RENTAL MARKET INDICATORS
VANCOUVER CMA, 1962-1983

	Vacancy Rates* (%)	Rental Apartment Completions** (Units)	Average Money Rents ($)	Consumer Price Index (1962=100)	Average Real Rents ($)	Year-to-Year % Change	
						Average Money Rents	Average Real Rents
1962	n/a	n/a	85.6	100.0	85.6	-	-
1963	4.3	n/a	85.8	100.4	85.5	0.2	-0.1
1964	4.7	n/a	86.2	100.5	85.8	0.5	0.4
1965	4.0	n/a	88.0	100.5	87.6	2.1	2.1
1966	1.5	n/a	90.4	101.2	89.3	2.7	1.9
1967	1.0	n/a	102.0	106.8	95.5	12.8	6.9
1968	1.3	n/a	115.0	110.7	103.9	12.7	8.8
1969	1.2	n/a	123.1	113.7	108.3	7.0	4.2
1970	2.7	n/a	134.5	118.0	114.0	9.3	5.3
1971	4.1	n/a	140.0	120.6	116.1	4.1	1.8
1972	2.4	5,082	145.8	123.2	118.3	4.1	1.9
1973	1.0	3,887	152.6	127.7	119.5	4.7	1.0
1974	0.3	3,194	164.4	140.4	117.1	7.7	-2.0
1975	0.2	3,360	191.3	155.8	122.8	16.4	4.9
1976	0.4	4,198	222.2	170.9	130.0	16.2	5.9
1977	1.6	2,527	234.0	183.0	127.9	5.3	-1.6
1978	1.5	3,716	241.1	197.1	122.3	3.0	-4.4
1979	0.9	3,781	266.0	212.3	125.3	10.3	2.5
1980	0.1	2,480	299.5	232.3	128.9	12.6	2.9
1981	0.1	3,335	361.0	265.3	136.1	20.5	5.6
1982	0.6	4,240	394.9	293.1	134.7	9.4	-1.0
1983	2.6	3,755	419.0	309.2	135.5	6.1	0.6

* Vacancy rates in privately-initiated rental apartment structures of 6 or more units excluding units built in the latest 6 months. Prior to 1975, rates are as of June; in 1975-1983 rates are as of April.

** Completions of rental apartment units in private structures of 6 or more units. Data are for the 12 months ending in June for 1972-74 and 12 months ending in March for 1975-1983.

Source: CMHC, Statistics Canada and estimates by Clayton Research Associates.